FIG. 1

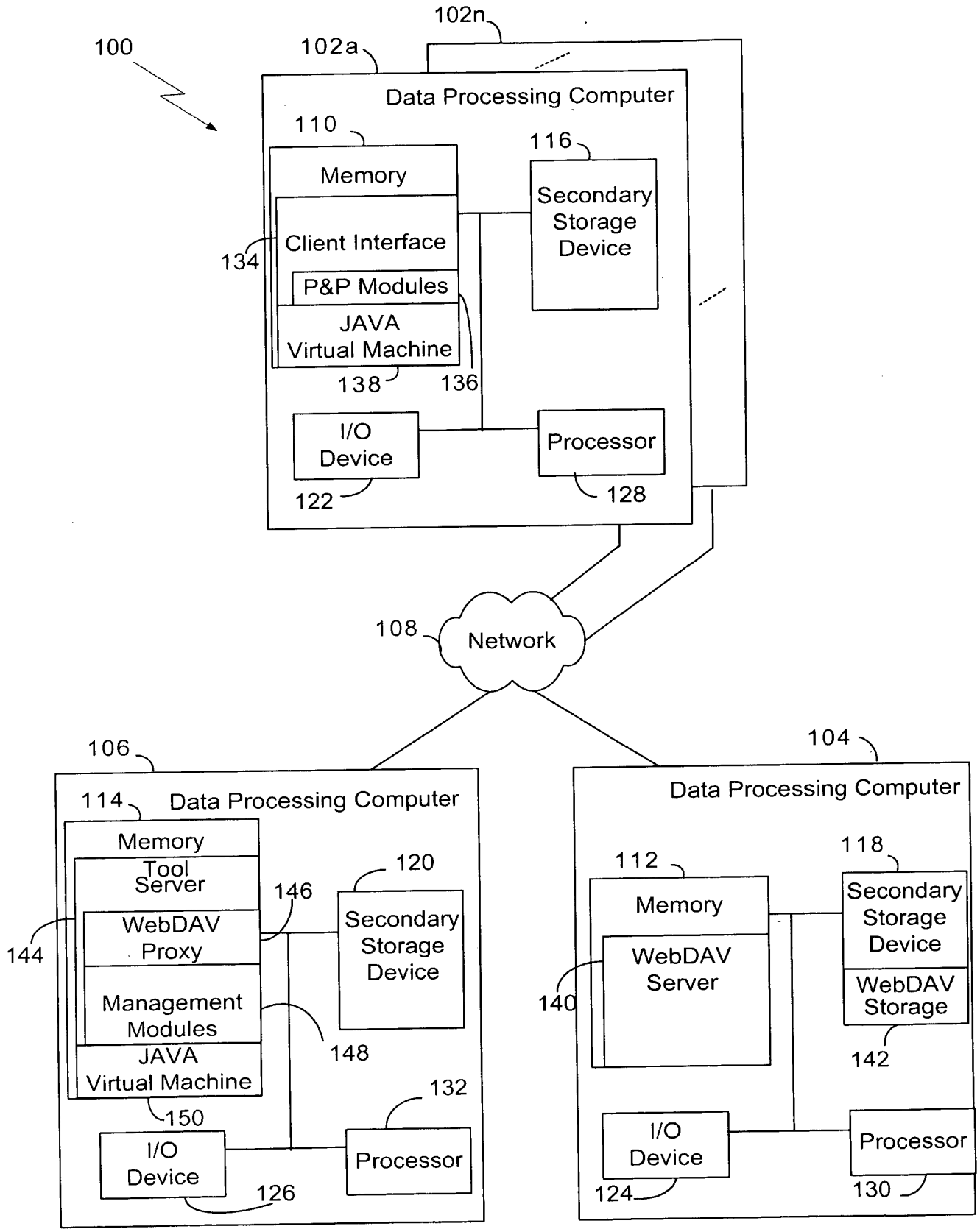
100
102n
102a
Data Processing Computer
110
Memory
116
Secondary Storage Device
Client Interface
134
P&P Modules
JAVA Virtual Machine
138
136
I/O Device
122
Processor
128
108
Network
106
114
Data Processing Computer
Memory
Tool Server
120
146
WebDAV Proxy
144
Secondary Storage Device
Management Modules
148
JAVA Virtual Machine
150
132
I/O Device
Processor
126
104
Data Processing Computer
112
118
Memory
Secondary Storage Device
WebDAV Server
140
WebDAV Storage
142
I/O Device
Processor
124
130

FIG. 2

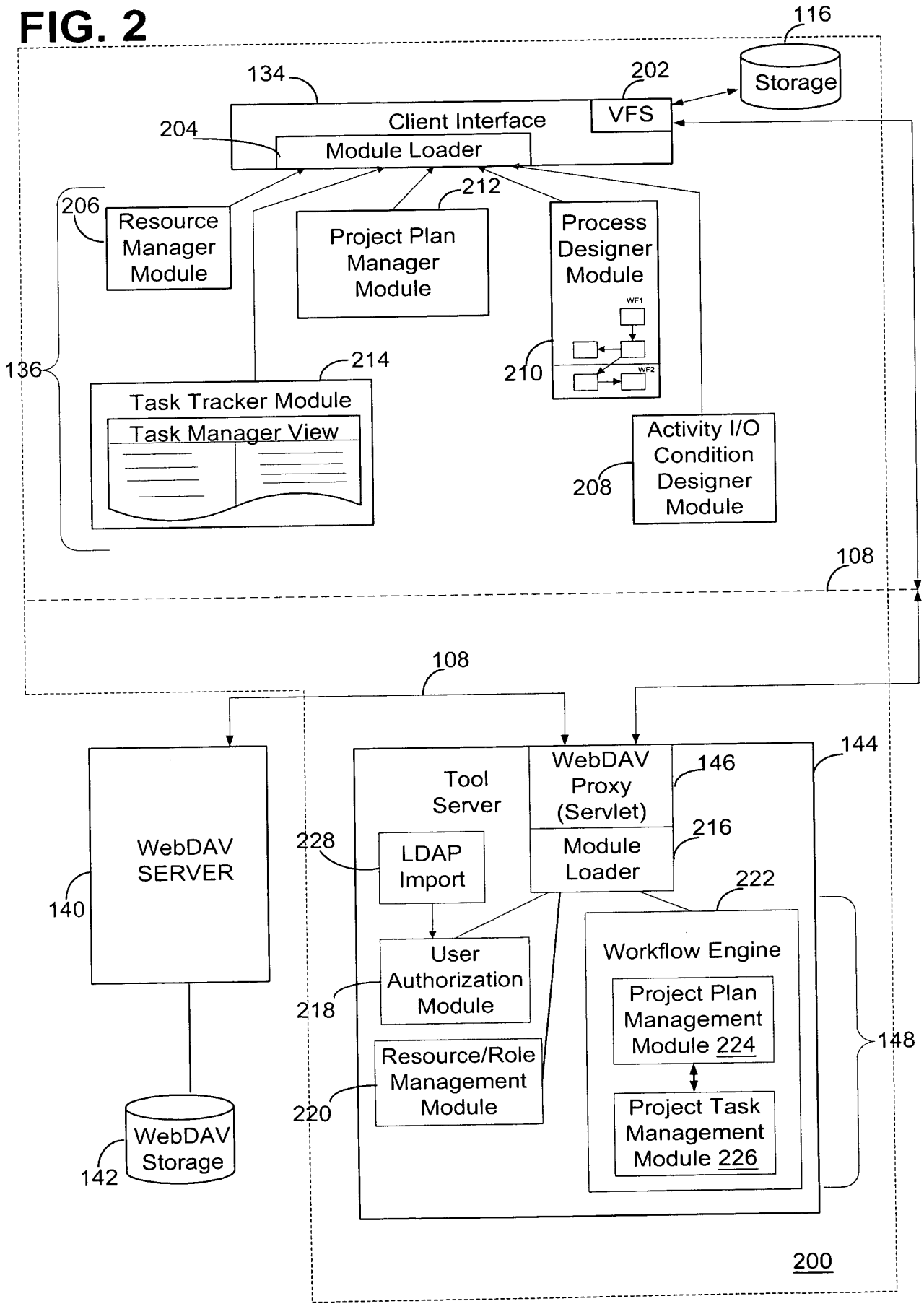
116
Storage
134
202
VFS
Client Interface
204
Module Loader
206
Resource Manager Module
212
Project Plan Manager Module
Process Designer Module
WF1
WF2
210
136
214
Task Tracker Module
Task Manager View
208
Activity I/O Condition Designer Module
108
108
144
WebDAV SERVER
140
Tool Server
WebDAV Proxy (Servlet)
146
216
228
LDAP Import
Module Loader
222
User Authorization Module
218
Workflow Engine
Project Plan Management Module 224
Resource/Role Management Module
220
148
Project Task Management Module 226
WebDAV Storage
142
200

FIG. 3

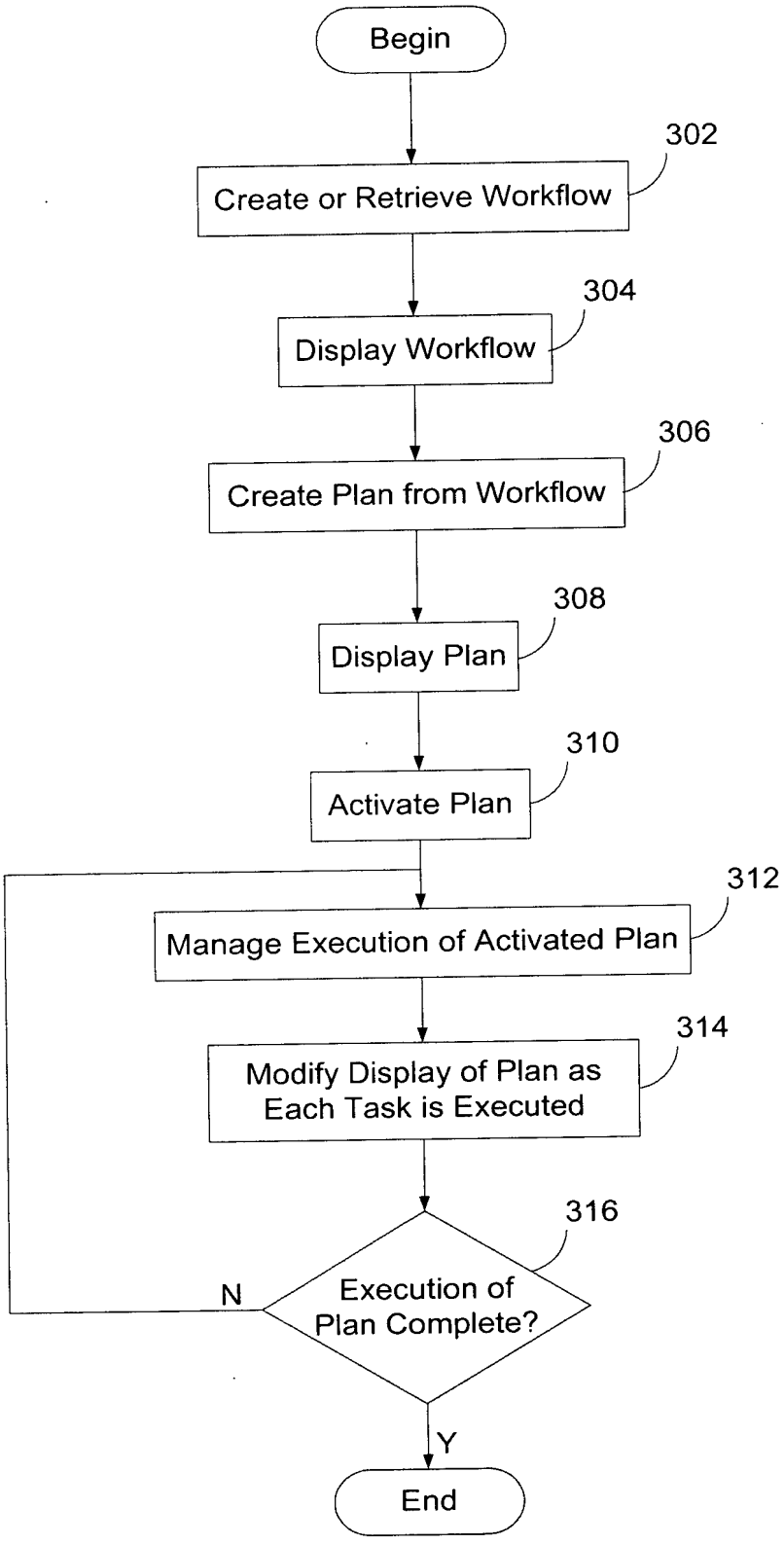
Begin
302
Create or Retrieve Workflow
304
Display Workflow
306
Create Plan from Workflow
308
Display Plan
310
Activate Plan
312
Manage Execution of Activated Plan
314
Modify Display of Plan as Each Task is Executed
316
Execution of Plan Complete?
N
Y
End

FIG. 4

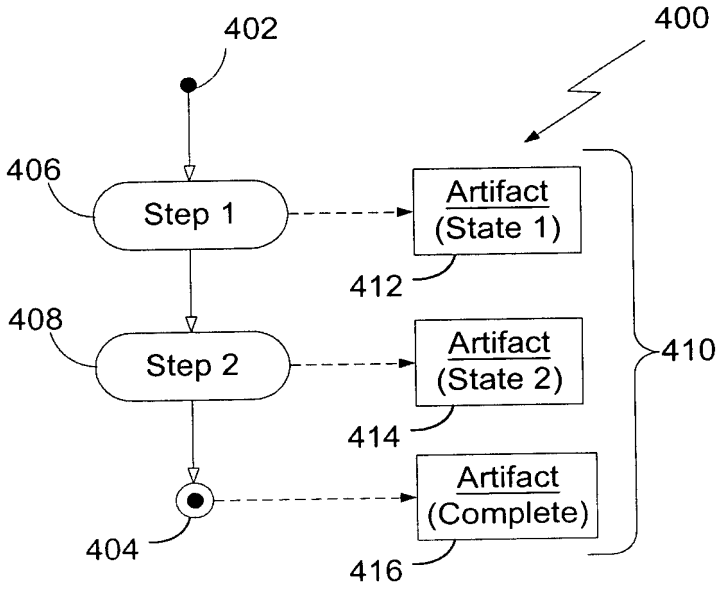
402
400
406
Step 1
Artifact
(State 1)
412
408
Step 2
Artifact
(State 2)
414
410
Artifact
(Complete)
404
416

FIG. 5

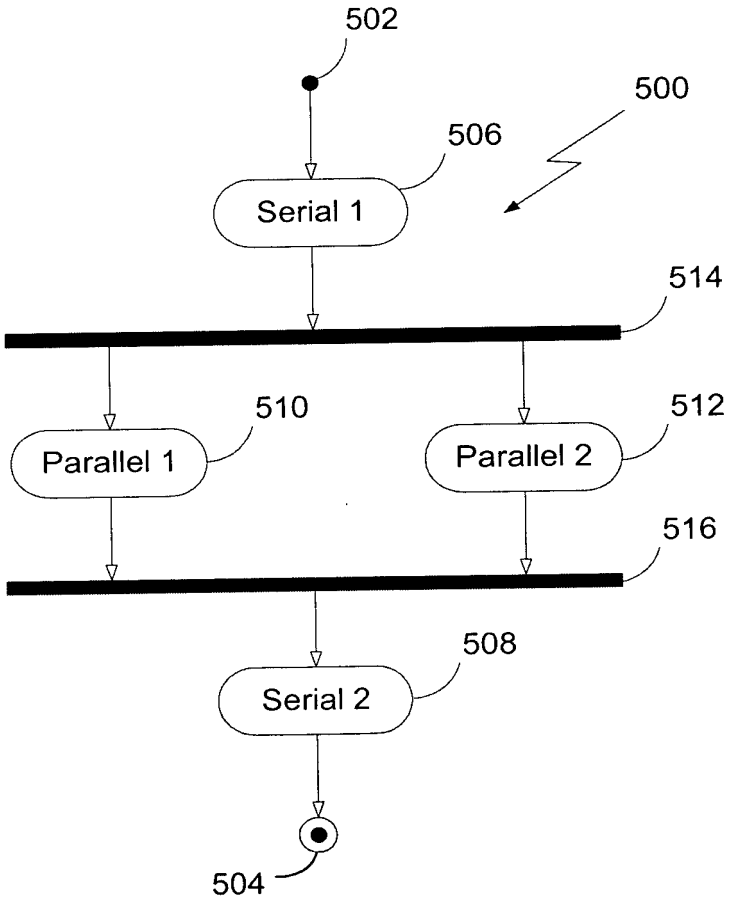
502
500
506
Serial 1
514
510
Parallel 1
512
Parallel 2
516
508
Serial 2
504

FIG. 6

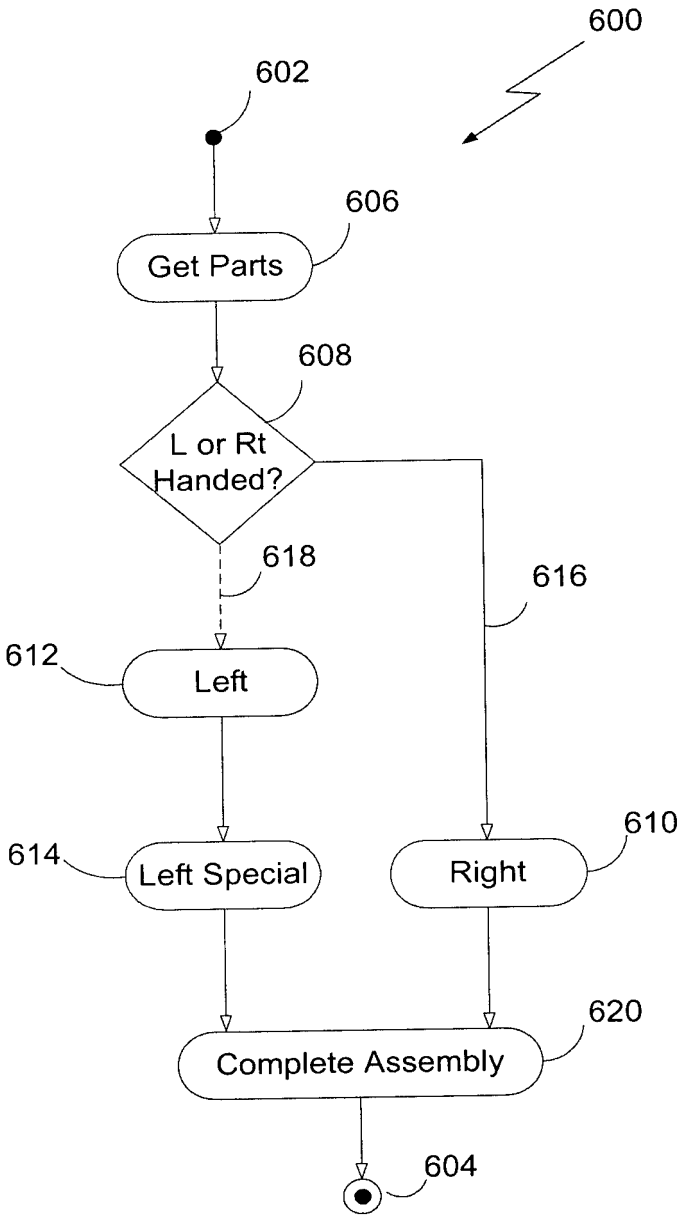
600
602
606
Get Parts
608
L or Rt Handed?
618
616
612
Left
614
Left Special
Right
610
620
Complete Assembly
604

FIG. 7

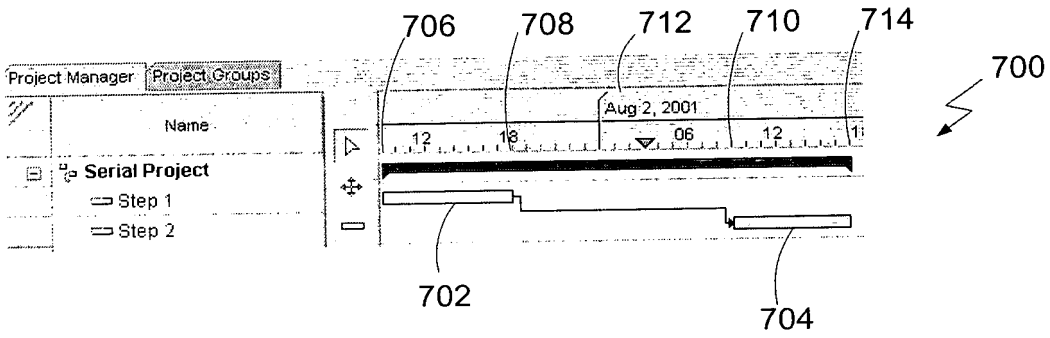

FIG. 8

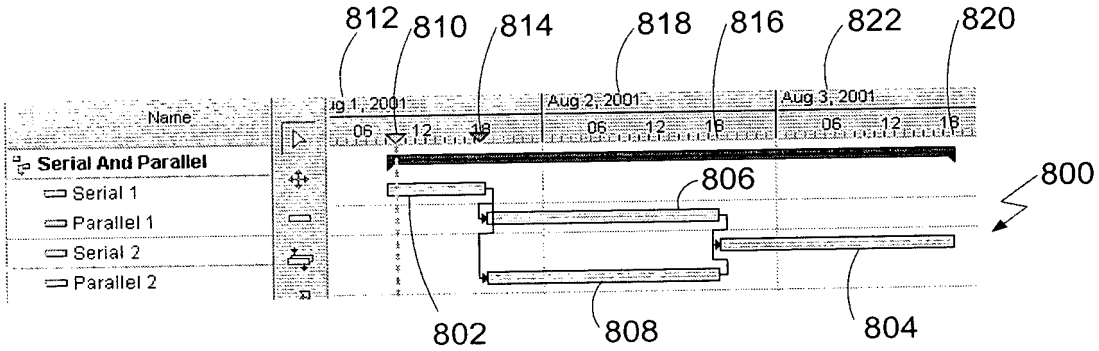

FIG. 9

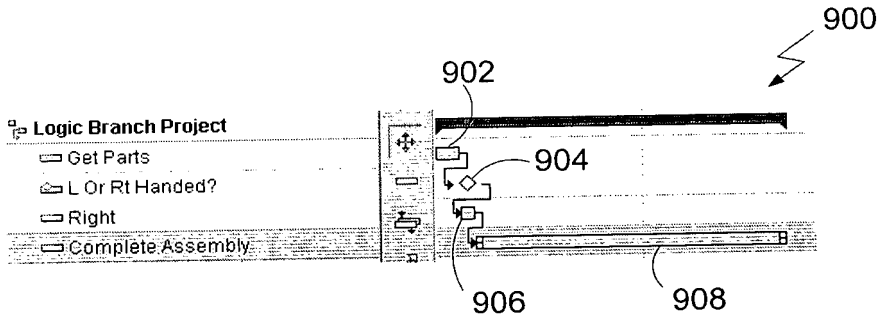

FIG. 10

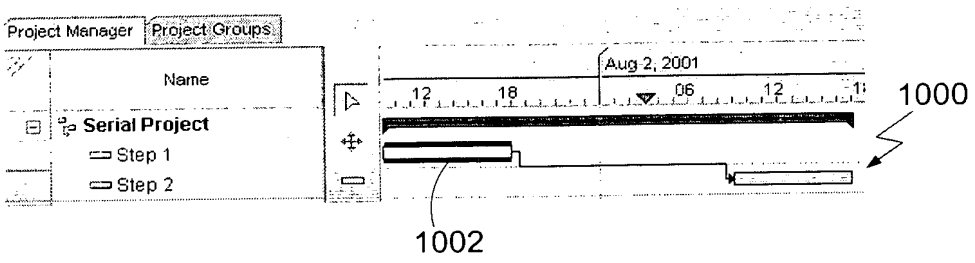

FIG. 11

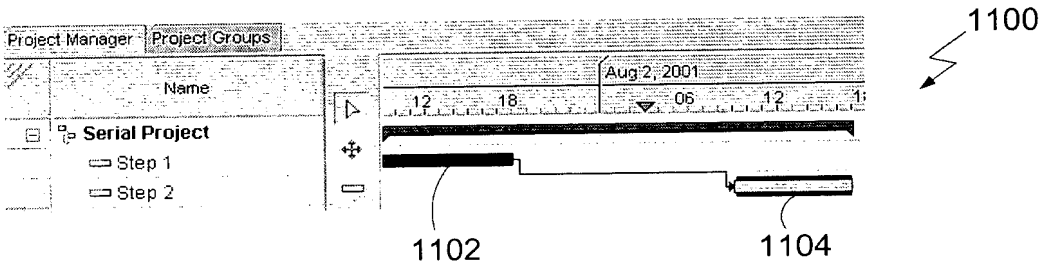

FIG. 12

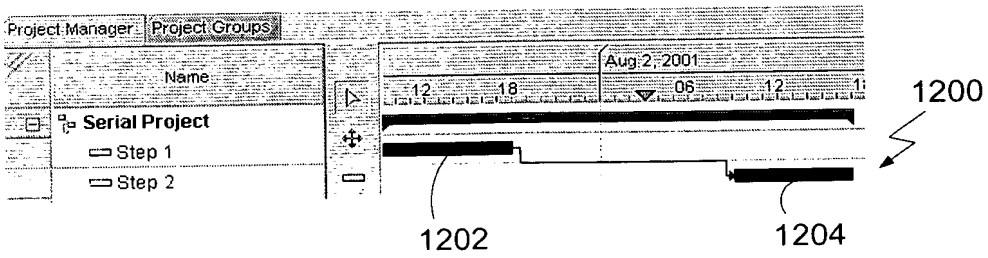

FIG. 13

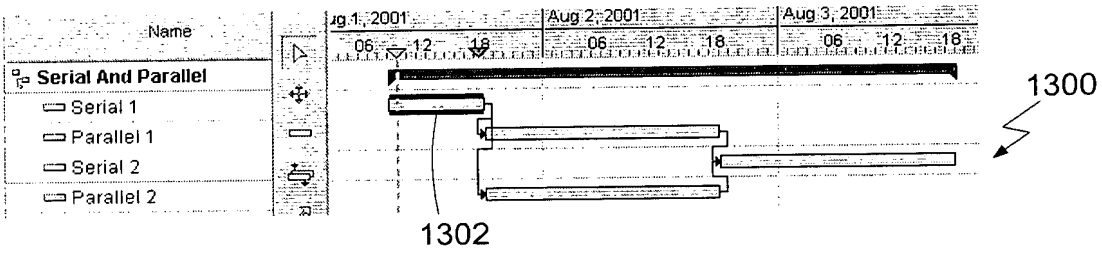

FIG. 14

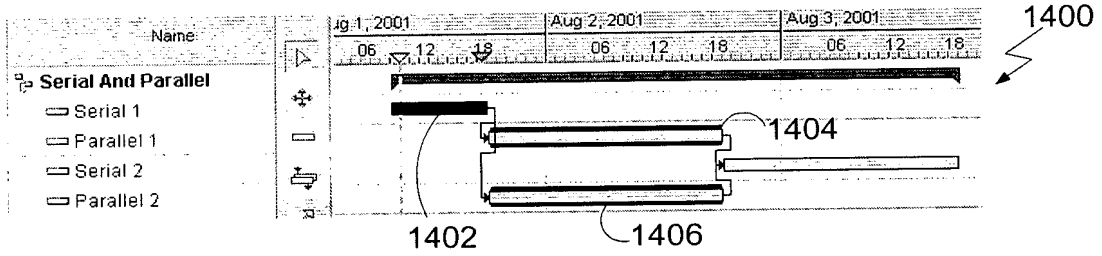

FIG. 15

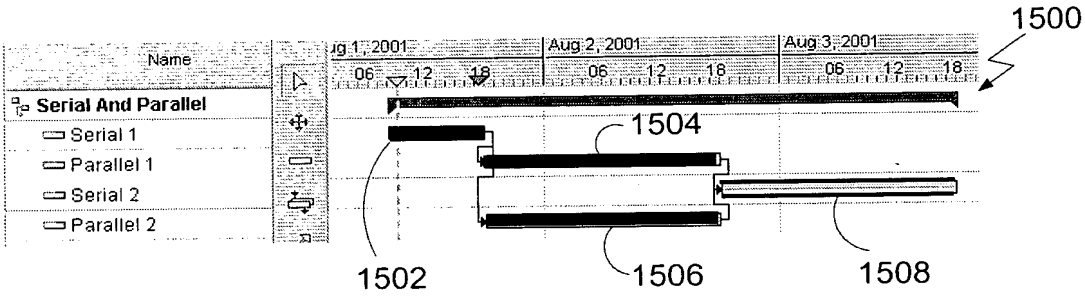

FIG. 16

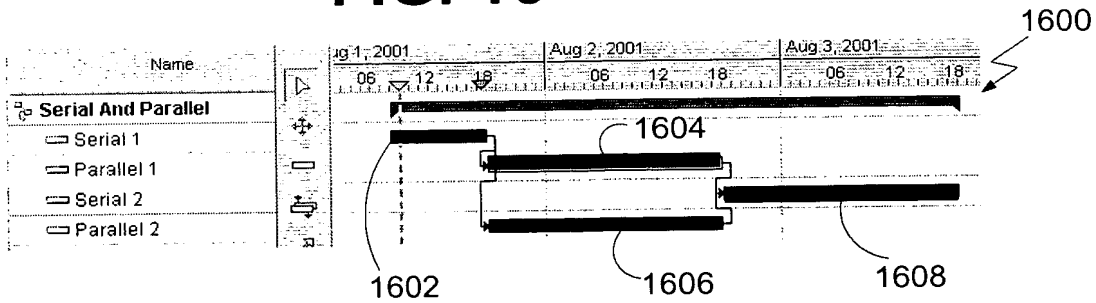

FIG. 17

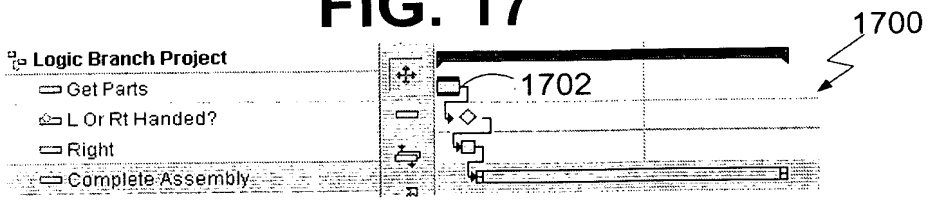

FIG. 18

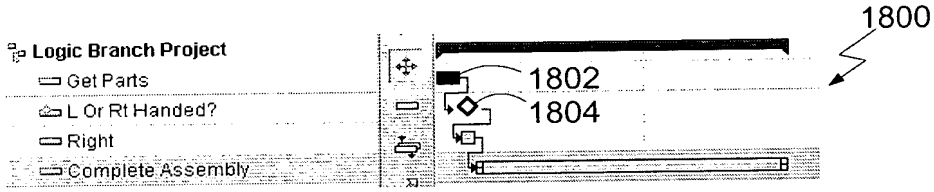

FIG. 19

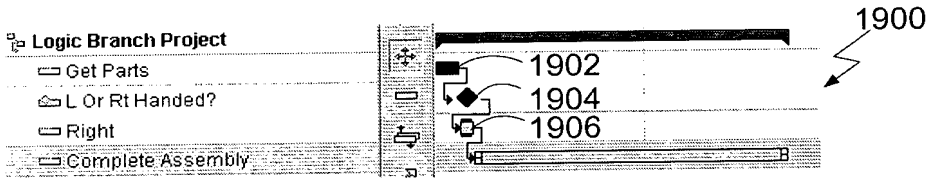

FIG. 20

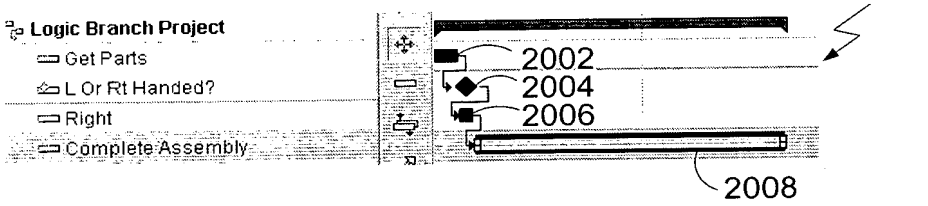

FIG. 21

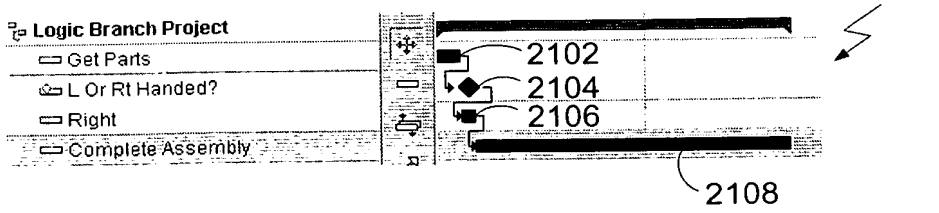

FIG. 22

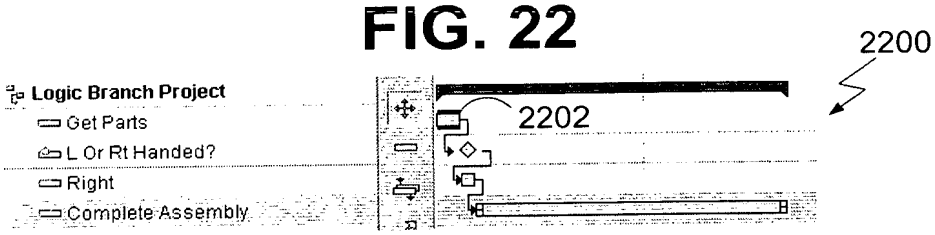

FIG. 23

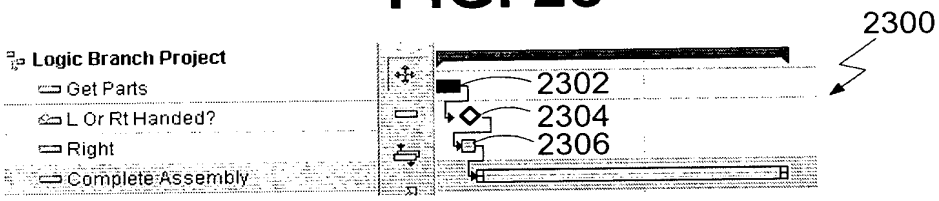

FIG. 24

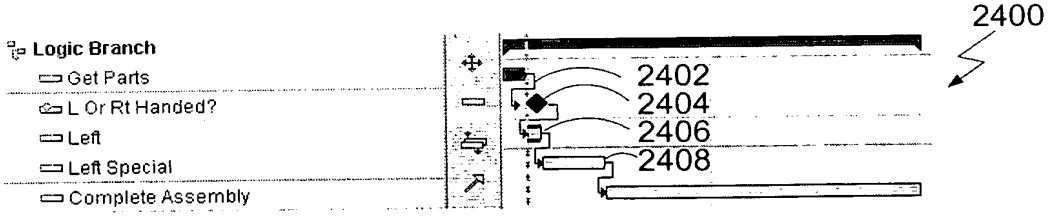

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FIG. 25

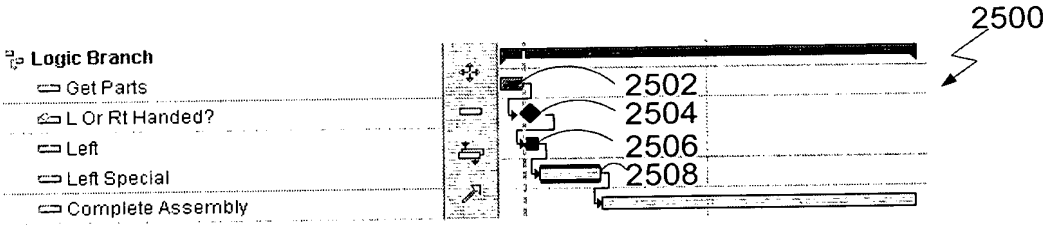

FIG. 26

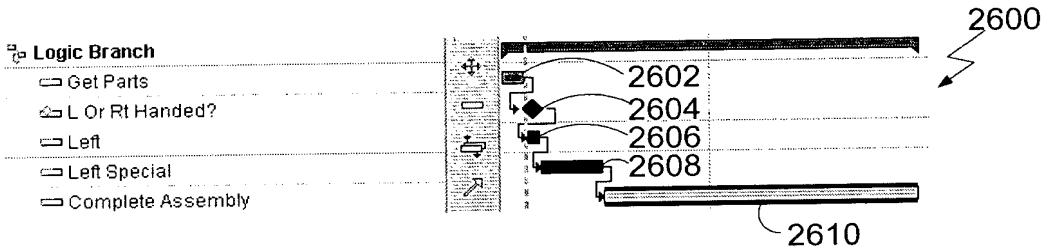

FIG. 27

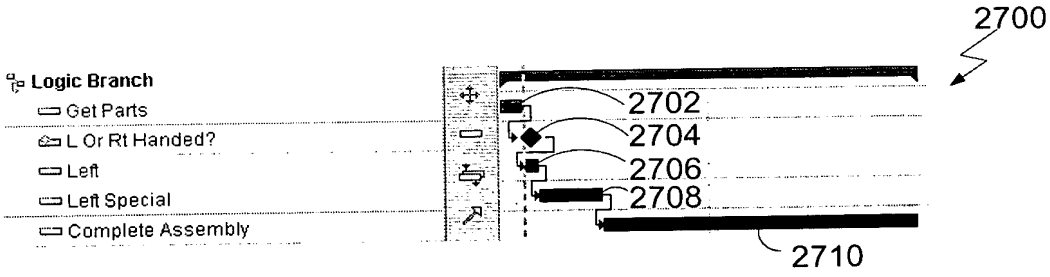

FIG. 28A

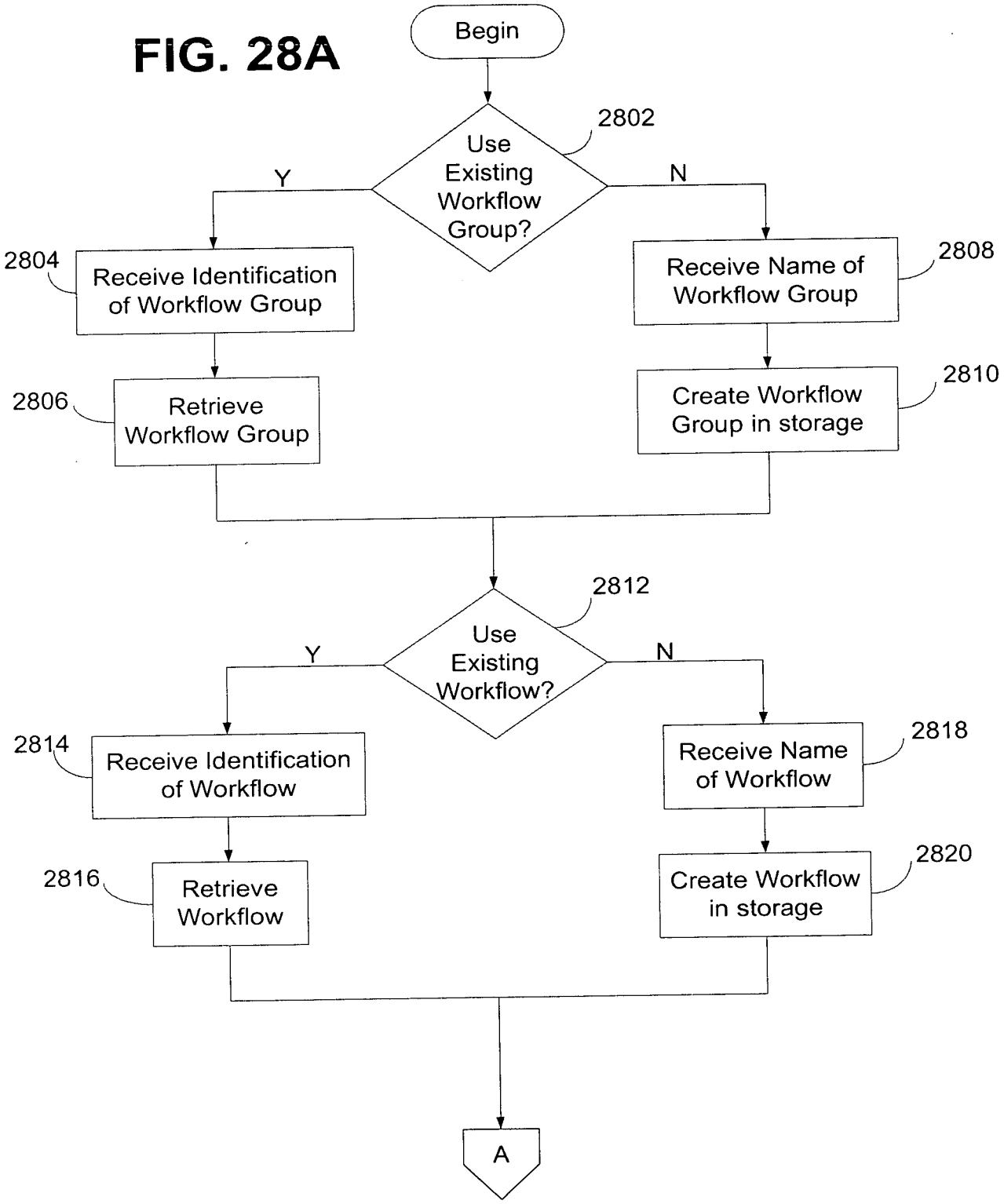
Begin
2802
Use Existing Workflow Group?
Y
N
2804
Receive Identification of Workflow Group
2806
Retrieve Workflow Group
2808
Receive Name of Workflow Group
2810
Create Workflow Group in storage
2812
Use Existing Workflow?
Y
N
2814
Receive Identification of Workflow
2816
Retrieve Workflow
2818
Receive Name of Workflow
2820
Create Workflow in storage
A

FIG. 28B

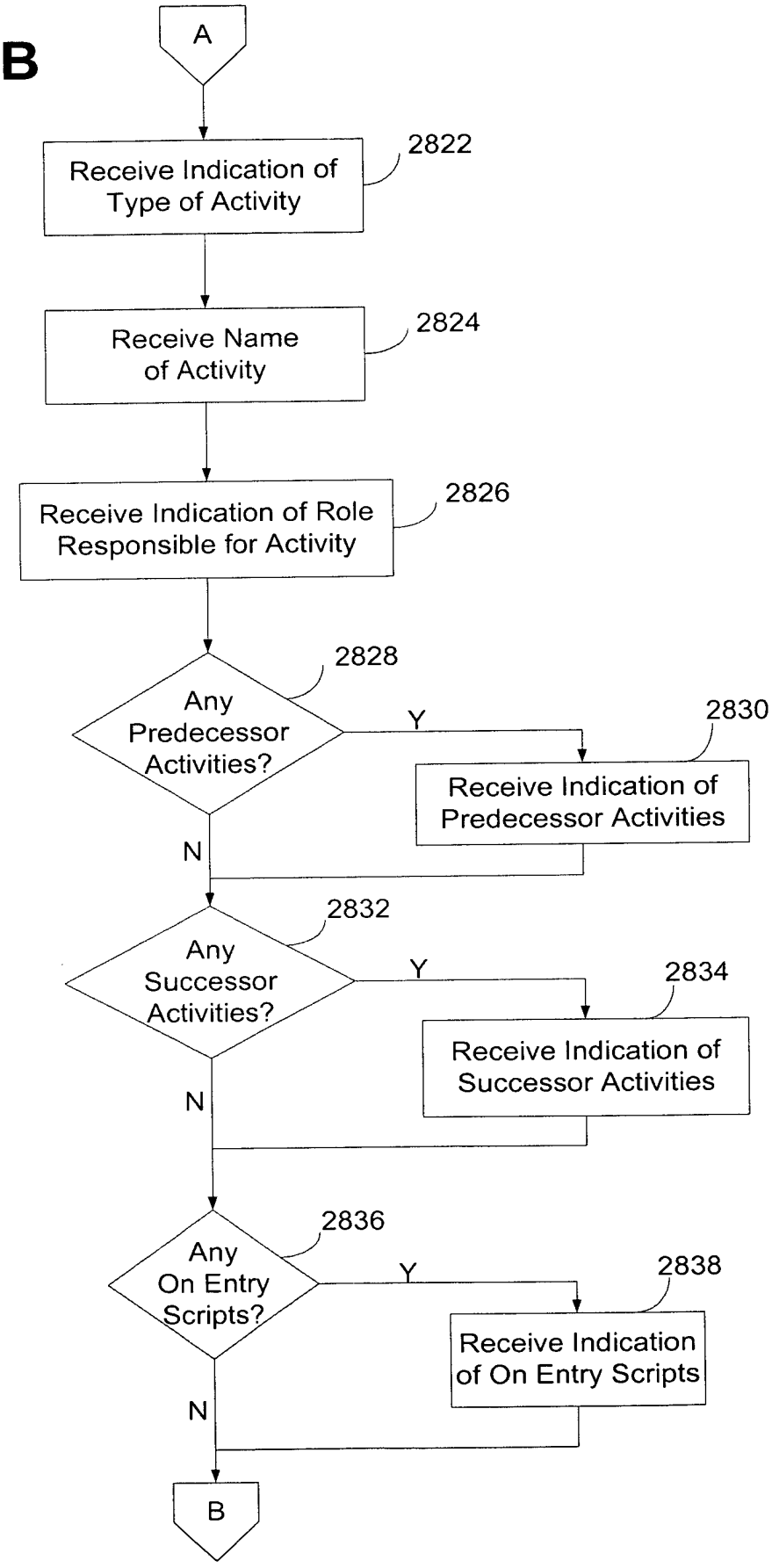

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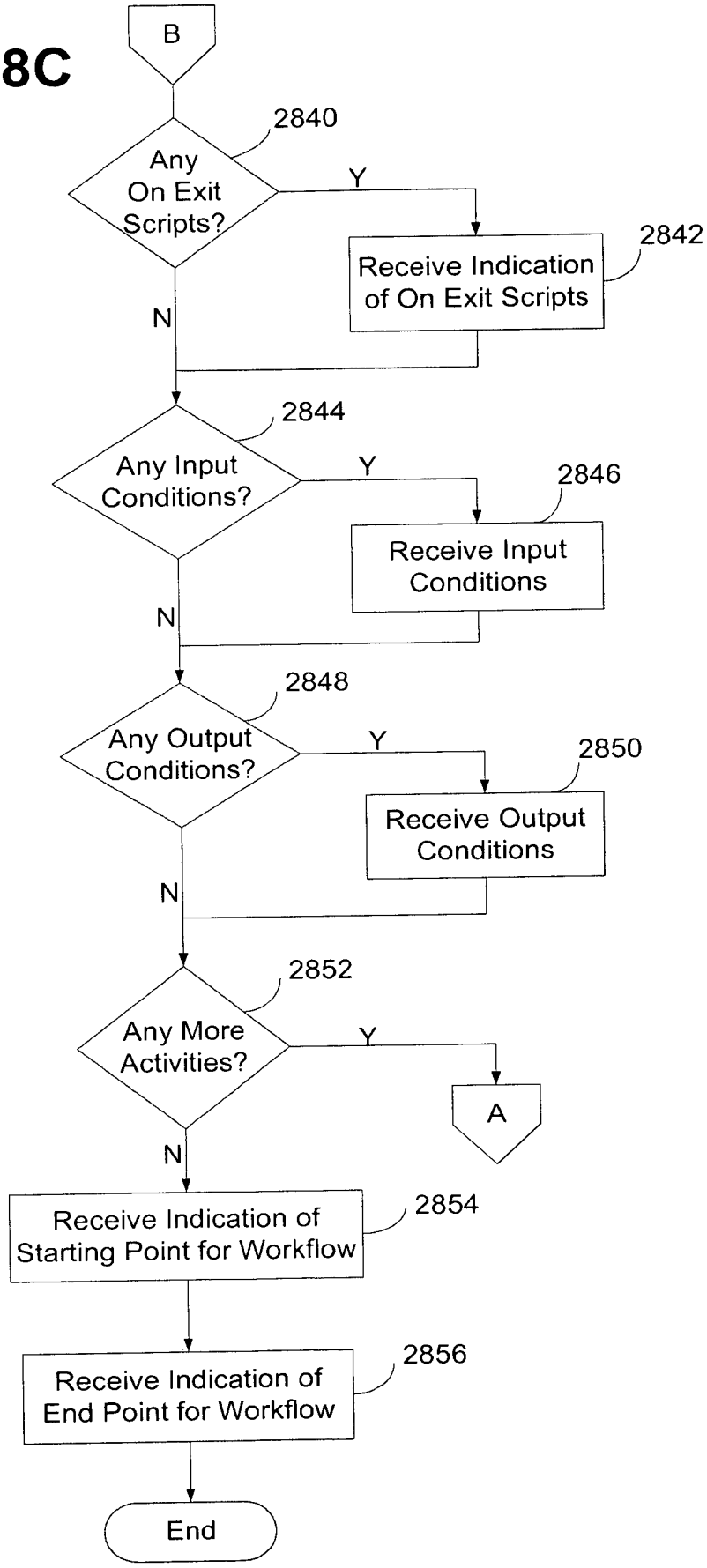
FIG. 28C


B
2840
Any On Exit Scripts?
Y
2842
Receive Indication of On Exit Scripts
N
2844
Any Input Conditions?
Y
2846
Receive Input Conditions
N
2848
Any Output Conditions?
Y
2850
Receive Output Conditions
N
2852
Any More Activities?
Y
A
N
Receive Indication of Starting Point for Workflow
2854
Receive Indication of End Point for Workflow
2856
End

Process Software Exhibit 2001
Page 1 of 1

FIG. 29

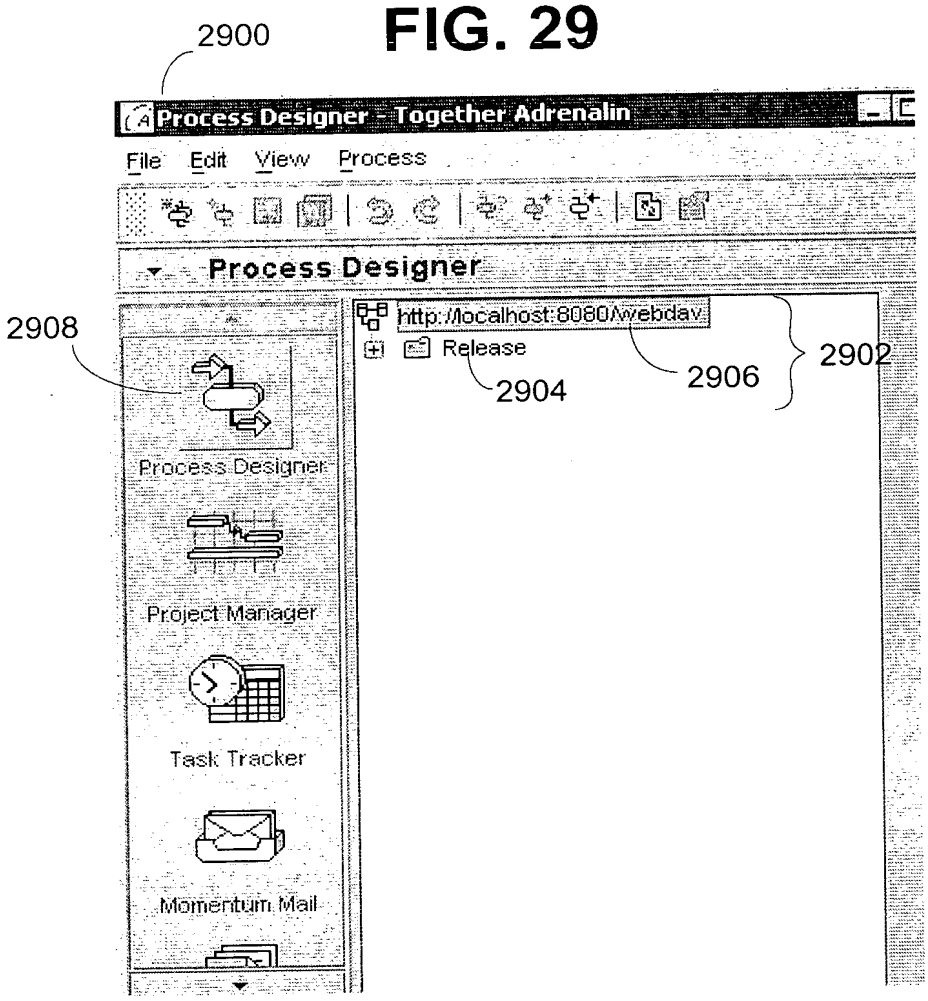


FIG. 30

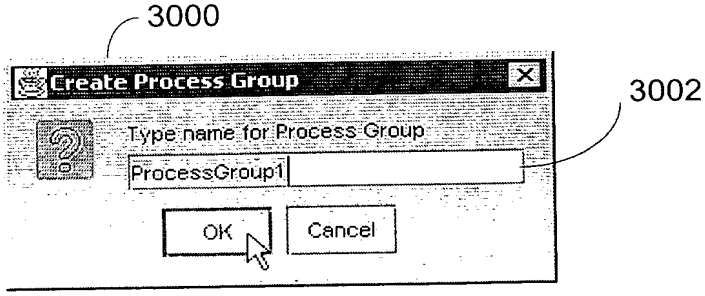


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FIG. 31

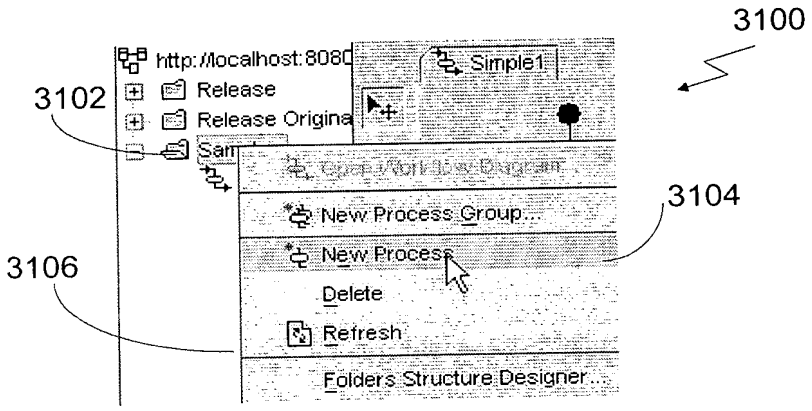

FIG. 32

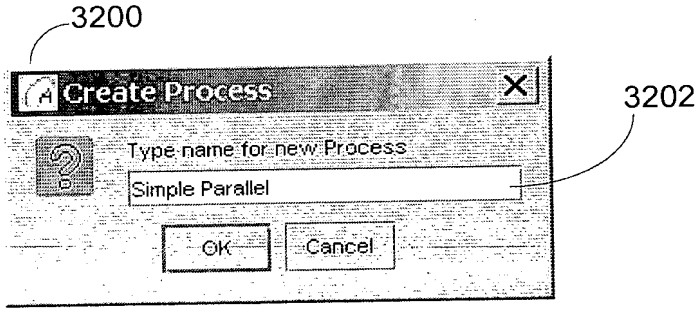

FIG. 33A

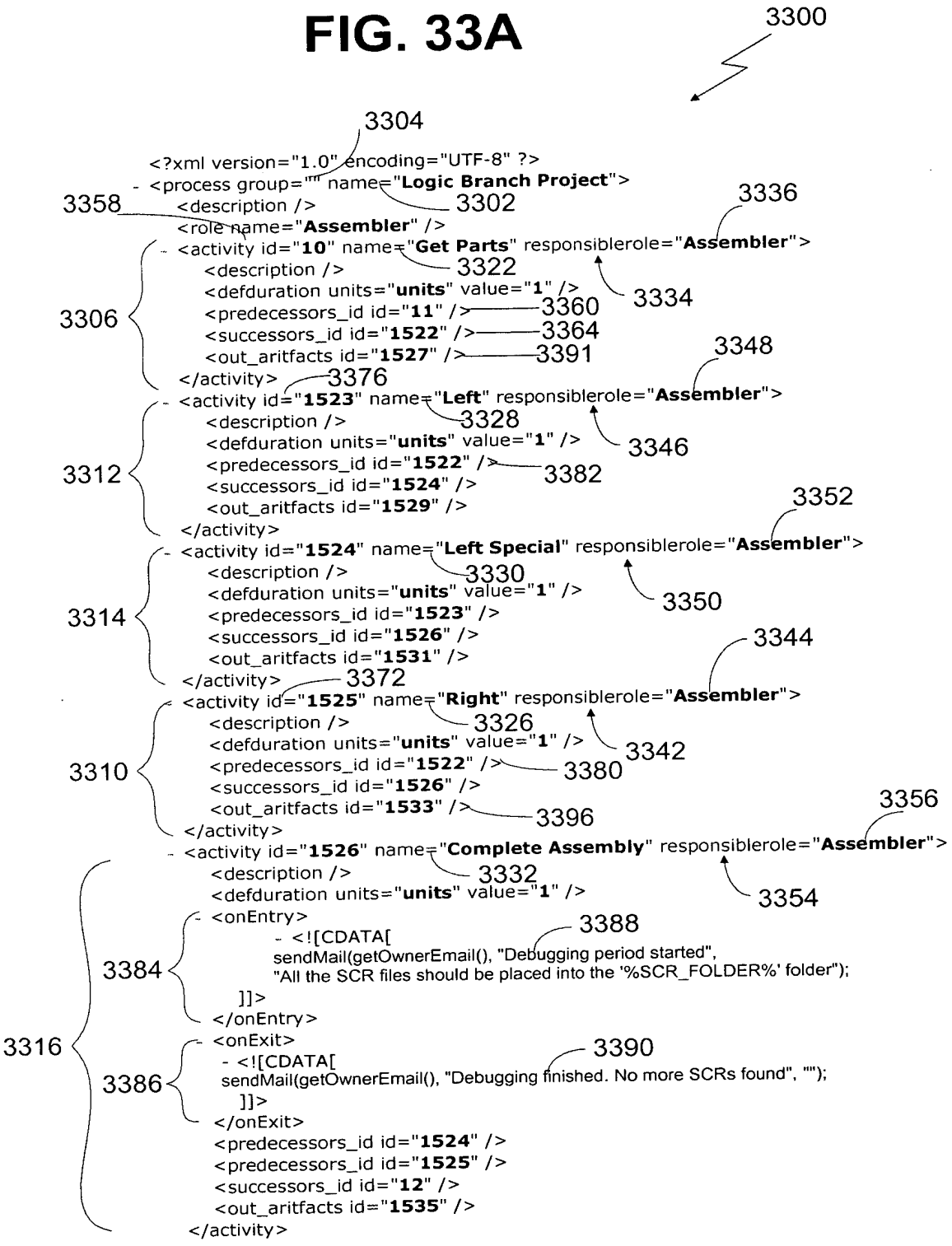
3300
3304
<?xml version="1.0" encoding="UTF-8" ?>
- <process group="" name="Logic Branch Project">
3358
<description /> 3302
<role name="Assembler" />
3336
- <activity id="10" name="Get Parts" responsiblerole="Assembler">
<description /> 3322
<defduration units="units" value="1" /> 3334
3306
<predecessors_id id="11" /> 3360
<successors_id id="1522" /> 3364
<out_aritfacts id="1527" /> 3391
</activity> 3376
3348
- <activity id="1523" name="Left" responsiblerole="Assembler">
<description /> 3328
<defduration units="units" value="1" /> 3346
3312
<predecessors_id id="1522" /> 3382
<successors_id id="1524" />
<out_aritfacts id="1529" />
</activity>
3352
- <activity id="1524" name="Left Special" responsiblerole="Assembler">
<description /> 3330
<defduration units="units" value="1" /> 3350
3314
<predecessors_id id="1523" />
<successors_id id="1526" />
<out_aritfacts id="1531" />
</activity> 3372
3344
- <activity id="1525" name="Right" responsiblerole="Assembler">
<description /> 3326
<defduration units="units" value="1" /> 3342
3310
<predecessors_id id="1522" /> 3380
<successors_id id="1526" />
<out_aritfacts id="1533" /> 3396
</activity>
3356
- <activity id="1526" name="Complete Assembly" responsiblerole="Assembler">
<description /> 3332
<defduration units="units" value="1" /> 3354
- <onEntry>
3388
- <![CDATA[
3384
sendMail(getOwnerEmail(), "Debugging period started",
"All the SCR files should be placed into the '%SCR_FOLDER%' folder");
]]>
</onEntry>
3316
- <onExit>
3390
- <![CDATA[
3386
sendMail(getOwnerEmail(), "Debugging finished. No more SCRs found", "");
]]>
</onExit>
<predecessors_id id="1524" />
<predecessors_id id="1525" />
<successors_id id="12" />
<out_aritfacts id="1535" />
</activity>

FIG. 33B

```
                                    3392          3393
- <artifact id="1527" identity="linkable1" name="Document is INITIAL">
    <description>The condition becomes true when the %Document% artifact gets the
      INITIAL state. To make this condition valid you should define the %Document%
      parameter and optionally define the document template and the application to
      open the document.</description>                                          3394
    <type>linkable</type>
    <link link="%Document%" />
    <state>INITIAL</state>                                                      3395
    <event id="1528" />
  </artifact>
- <artifact id="1529" identity="linkable1" name="Document is LEFT">
    <description>The condition becomes true when the %Document% artifact gets the
      LEFT state. To make this condition valid you should define the %Document%
      parameter and optionally define the document template and the application to
      open the document.</description>
    <type>linkable</type>
    <link link="%Document%" />
    <state>LEFT</state>
    <event id="1530" />
  </artifact>
- <artifact id="1531" identity="linkable1" name="Document is LEFT SPECIAL">
    <description>The condition becomes true when the %Document% artifact gets the
      LEFT SPECIAL state. To make this condition valid you should define the
      %Document% parameter and optionally define the document template and the
      application to open the document.</description>
    <type>linkable</type>
    <link link="%Document%" />
    <state>LEFT SPECIAL</state>
    <event id="1532" />
  </artifact>                                                                   3398
                                    3397
- <artifact id="1533" identity="linkable1" name="Document is RIGHT">
    <description>The condition becomes true when the %Document% artifact gets the
      RIGHT state. To make this condition valid you should define the %Document%
      parameter and optionally define the document template and the application to
      open the document.</description>
    <type>linkable</type>
    <link link="%Document%" />
    <state>RIGHT</state>                                                        3399
    <event id="1534" />
  </artifact>
- <artifact id="1535" identity="linkable1" name="Document is APPROVED">
    <description>The condition becomes true when the %Document% artifact gets the
      APPROVED state. To make this condition valid you should define the
      %Document% parameter and optionally define the document template and the
      application to open the document.</description>
    <type>linkable</type>
    <link link="%Document%" />
    <state>APPROVED</state>
    <event id="1536" />
  </artifact>
```

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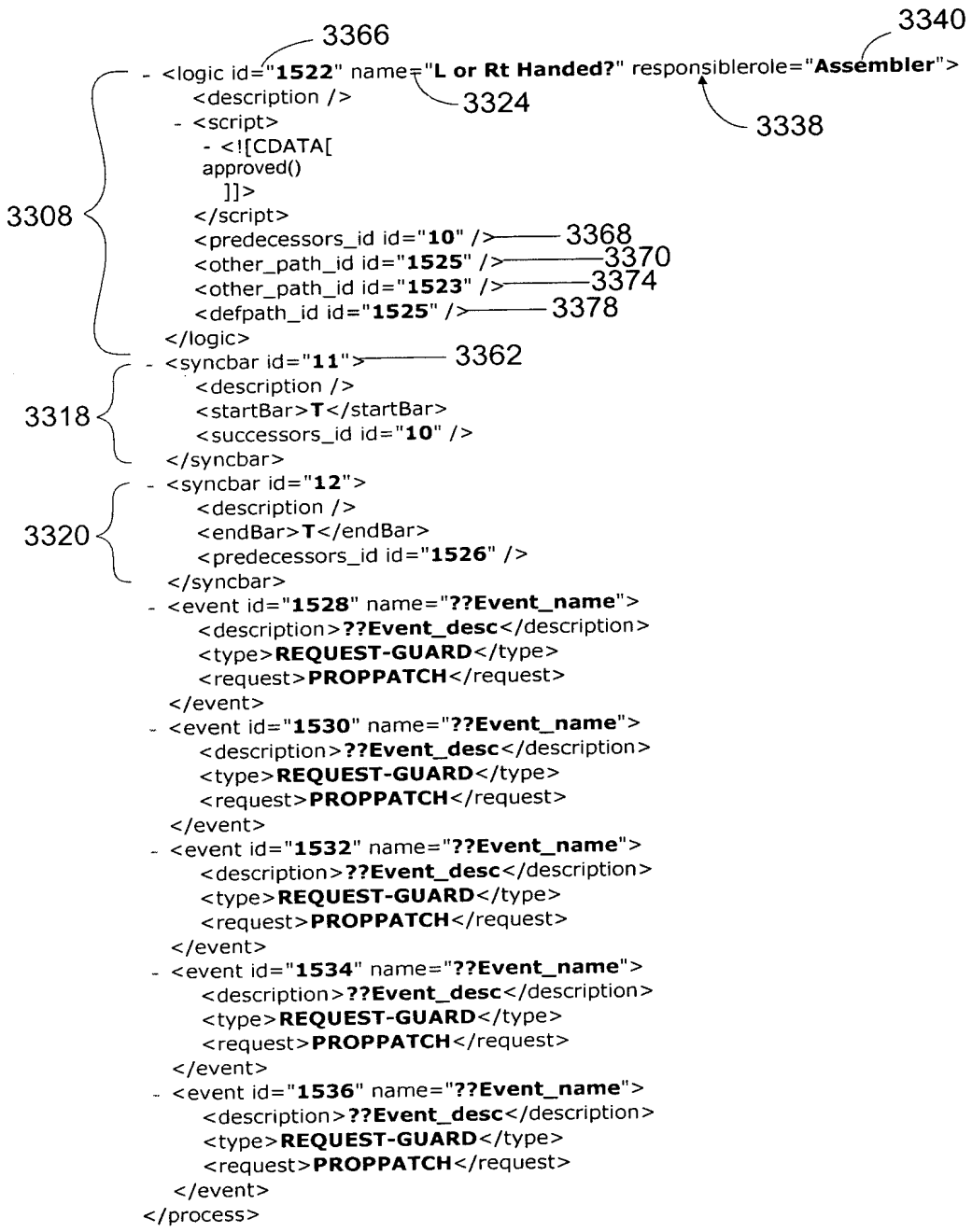
FIG. 33C



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10/13/2004, 9:44 PM 650

FIG. 34

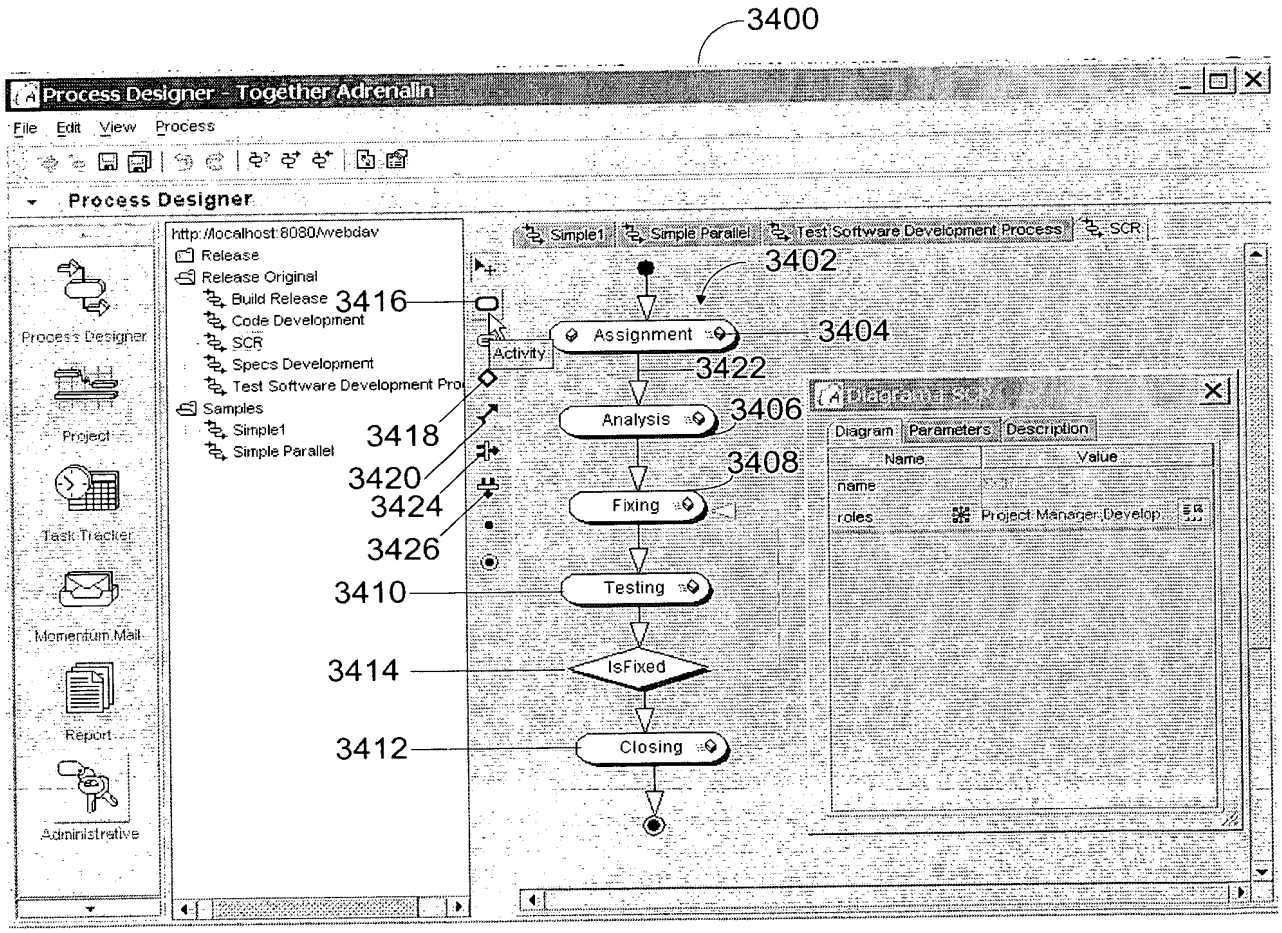

FIG. 35

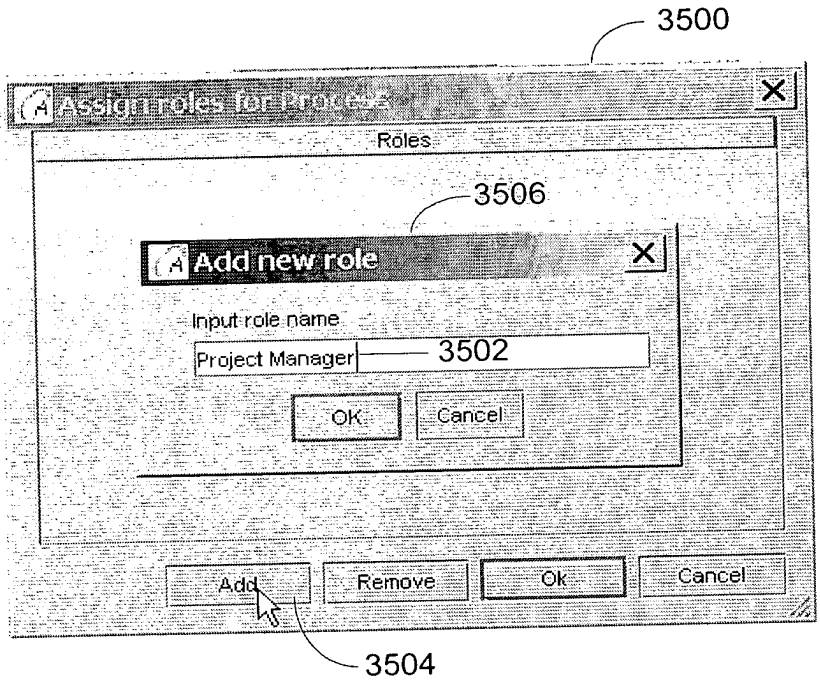
3500
Roles
3506
Add new role
Input role name
Project Manager
3502
OK
Cancel
Add
Remove
Ok
Cancel
3504

FIG. 36

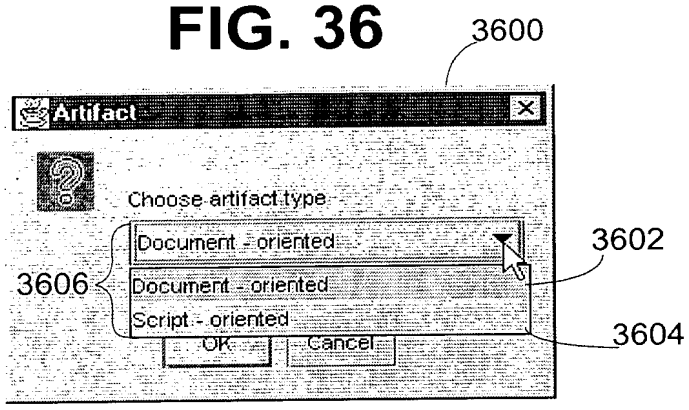
3600
Artifact
Choose artifact type
Document - oriented
3602
3606
Document - oriented
Script - oriented
3604
OK
Cancel

FIG. 37

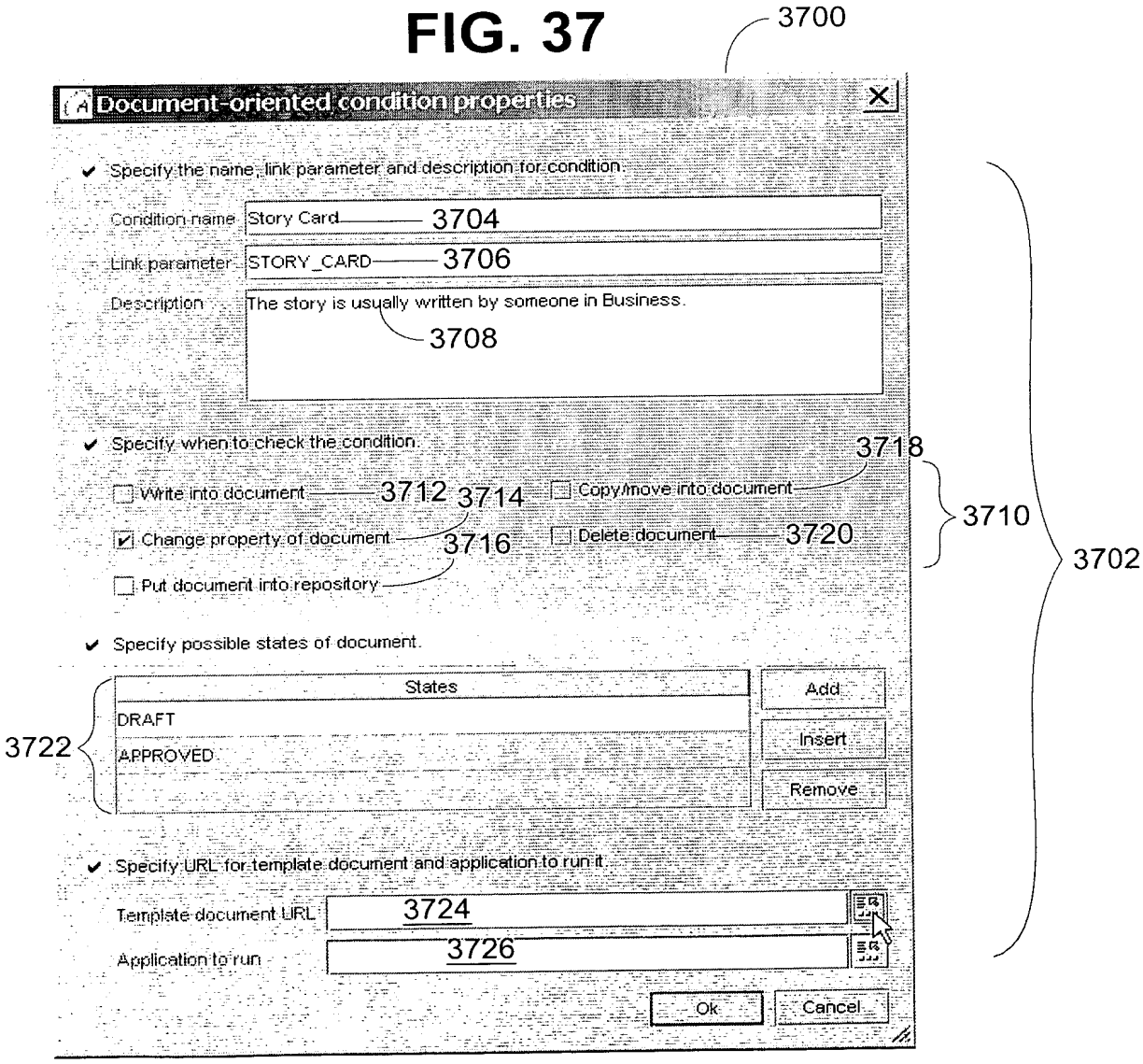
3700
Document-oriented condition properties
Specify the name, link parameter and description for condition.
Condition name
Story Card
3704
Link parameter
STORY_CARD
3706
Description
The story is usually written by someone in Business.
3708
Specify when to check the condition.
3718
Write into document
3712
3714
Copy/move into document
3710
Change property of document
3716
Delete document
3720
Put document into repository
3702
Specify possible states of document.
States
Add
3722
DRAFT
Insert
APPROVED
Remove
Specify URL for template document and application to run it.
Template document URL
3724
Application to run
3726
Ok
Cancel

FIG. 38

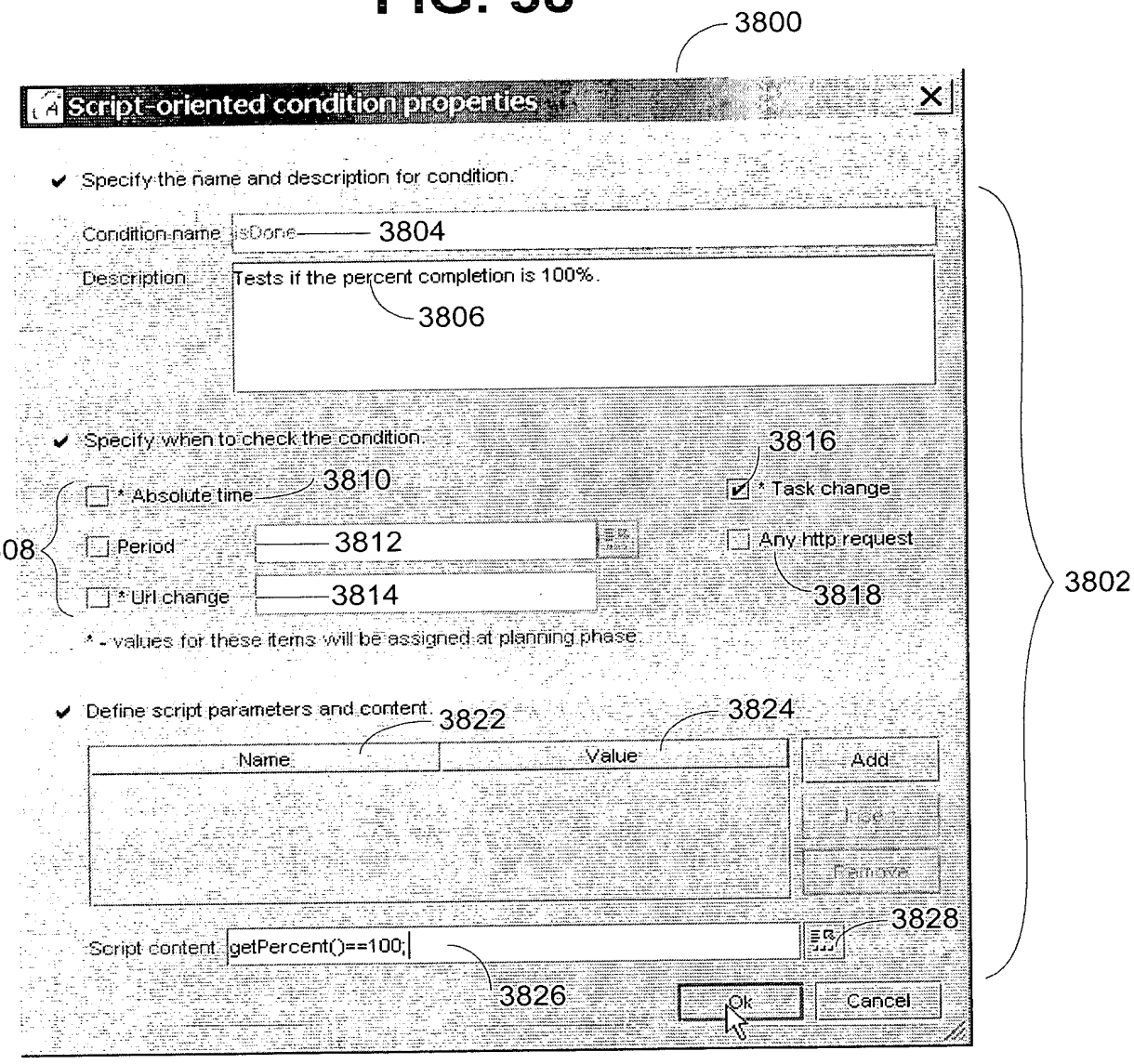
3800
Script-oriented condition properties
Specify the name and description for condition.
Condition name
isDone
3804
Description
Tests if the percent completion is 100%.
3806
Specify when to check the condition.
3816
* Absolute time
3810
* Task change
Period
3812
Any http request
3808
* Url change
3814
3818
3802
* - values for these items will be assigned at planning phase.
Define script parameters and content.
3822
3824
Name
Value
Add
Edit
Remove
Script content
getPercent()==100;
3828
3826
Ok
Cancel

FIG. 39

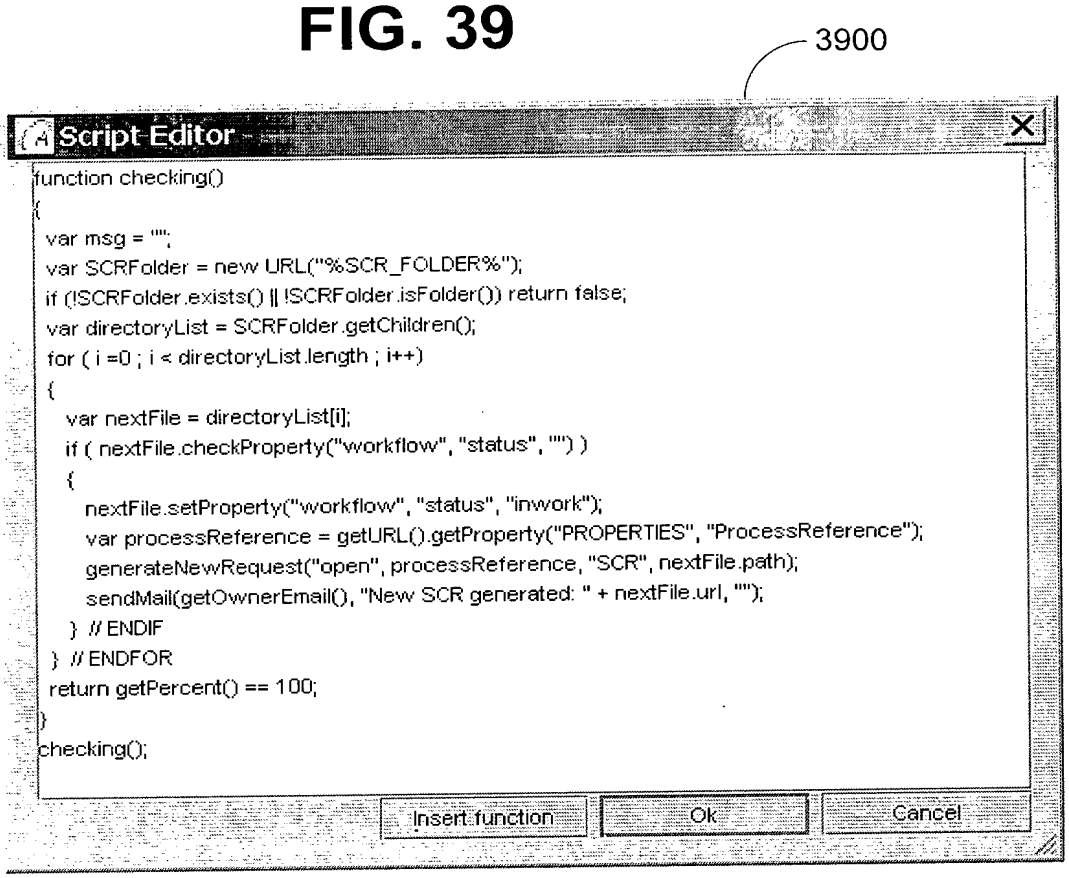
3900
Script Editor
function checking()
{
var msg = "";
var SCRFolder = new URL("%SCR_FOLDER%");
if (!SCRFolder.exists() || !SCRFolder.isFolder()) return false;
var directoryList = SCRFolder.getChildren();
for (i =0 ; i < directoryList.length ; i++)
{
var nextFile = directoryList[i];
if (nextFile.checkProperty("workflow", "status", ""))
{
nextFile.setProperty("workflow", "status", "inwork");
var processReference = getURL().getProperty("PROPERTIES", "ProcessReference");
generateNewRequest("open", processReference, "SCR", nextFile.path);
sendMail(getOwnerEmail(), "New SCR generated: " + nextFile.url, "");
} // ENDIF
} // ENDFOR
return getPercent() == 100;
}
checking();
Insert function
Ok
Cancel

FIG. 40

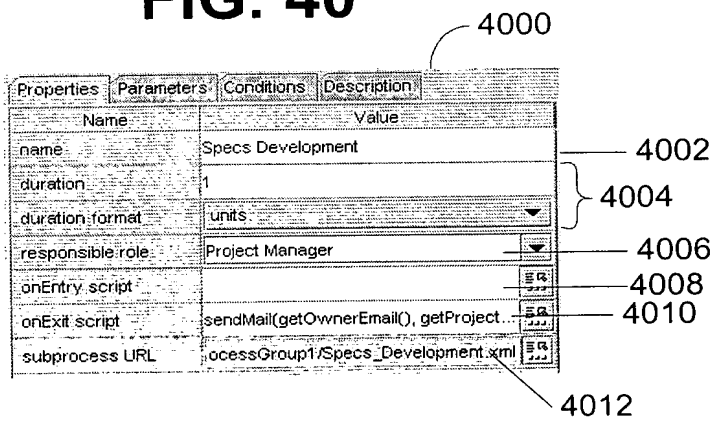
4000
Properties
Parameters
Conditions
Description
Name
Value
name
Specs Development
duration
1
duration format
units
responsible role
Project Manager
onEntry script
onExit script
sendMail(getOwnerEmail(), getProject...
subprocess URL
ocessGroup1/Specs_Development.xml
4002
4004
4006
4008
4010
4012

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FIG. 41A

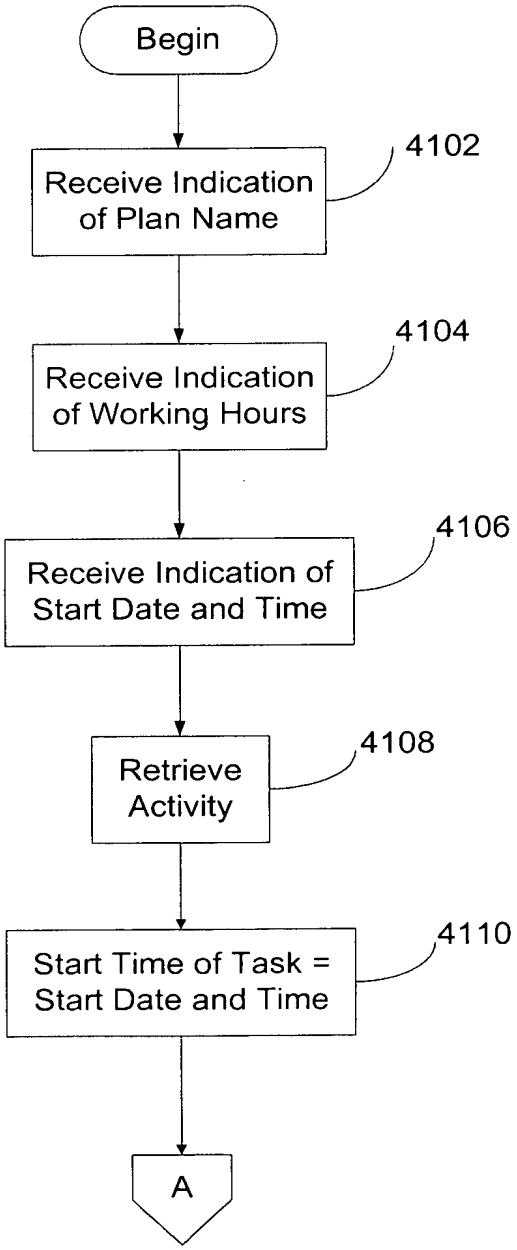

FIG. 41B

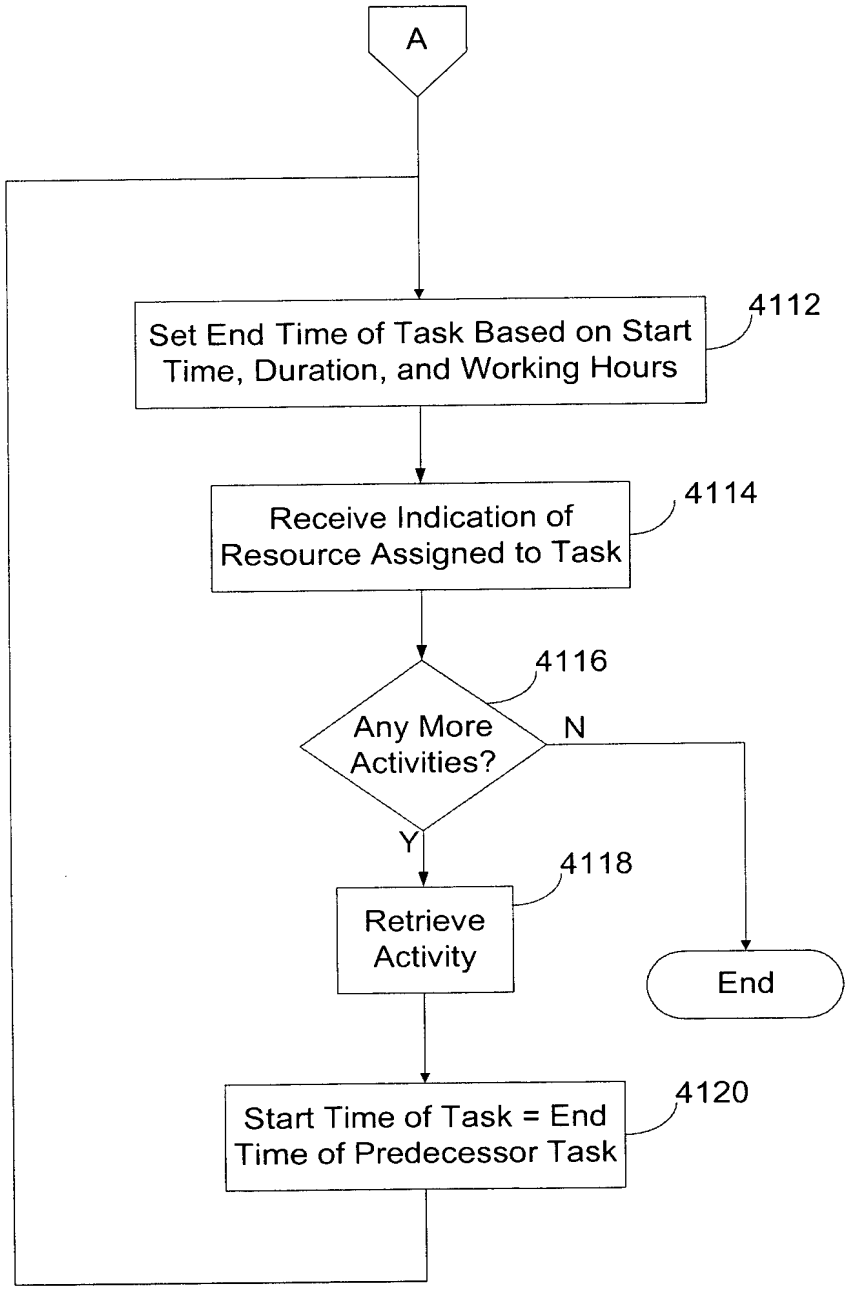
A
Set End Time of Task Based on Start Time, Duration, and Working Hours
4112
Receive Indication of Resource Assigned to Task
4114
4116
Any More Activities?
N
Y
4118
Retrieve Activity
End
Start Time of Task = End Time of Predecessor Task
4120

FIG. 42

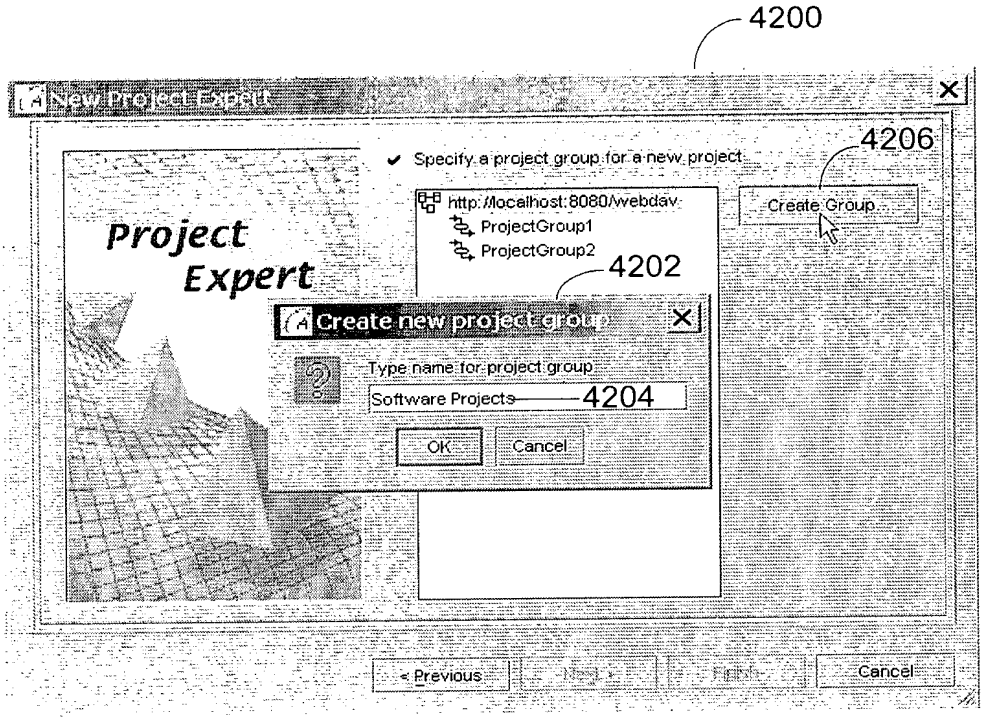

FIG. 43

FIG. 44

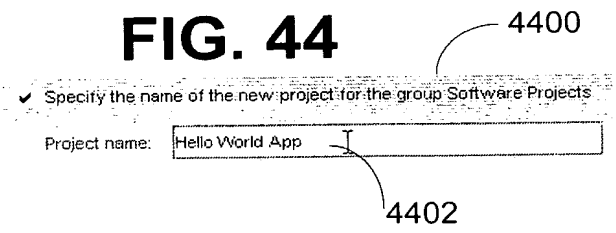

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FIG. 45

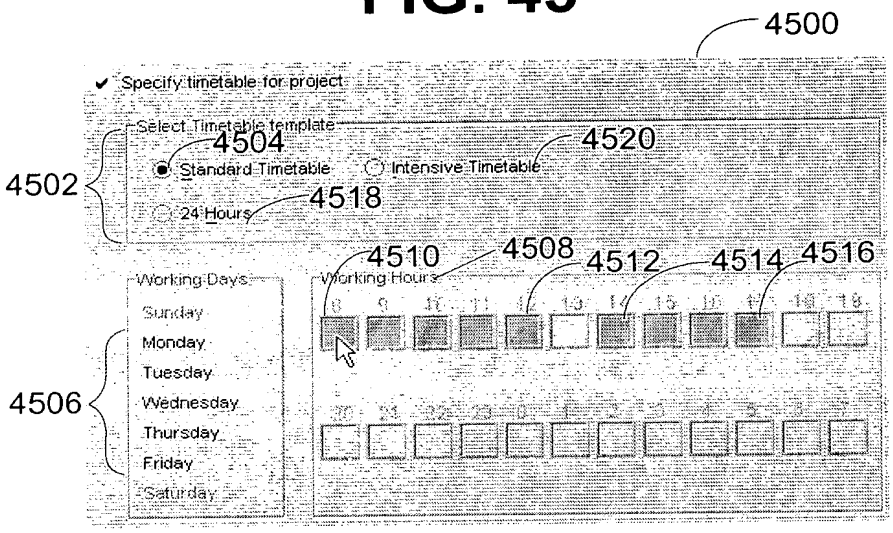
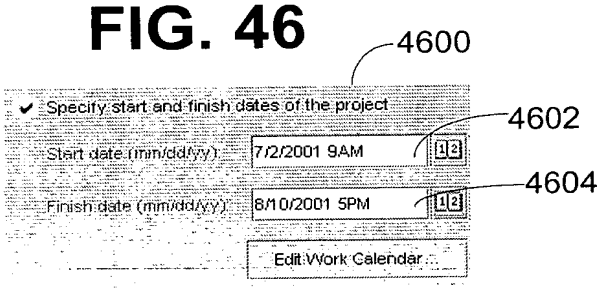


FIG. 46



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4700

FIG. 47

```
<?xml version="1.0" encoding="UTF-8" ?>
- <process group="" name="Serial & Parallel">
    <description />
    <role name="Worker" />
  - <activity id="10" name="Serial 1" responsiblerole="Worker">
      <description />
      <defduration units="hours" value="9" />
      <predecessors_id id="11" />
      <successors_id id="1522" />
    </activity>
  - <activity id="1523" name="Parallel 1" responsiblerole="Worker">
      <description />
      <defduration units="hours" value="24" />
      <predecessors_id id="1522" />
      <successors_id id="1525" />
    </activity>
  - <activity id="1524" name="Parallel 2" responsiblerole="Worker">
      <description />
      <defduration units="hours" value="24" />
      <predecessors_id id="1522" />
      <successors_id id="1525" />
    </activity>
  - <activity id="1526" name="Serial 2" responsiblerole="Worker">
      <description />
      <defduration units="hours" value="24" />
      <predecessors_id id="1525" />
      <successors_id id="12" />
    </activity>
  - <syncbar id="11">
      <description />
      <startBar>T</startBar>
      <successors_id id="10" />
    </syncbar>
  - <syncbar id="12">
      <description />
      <endBar>T</endBar>
      <predecessors_id id="1526" />
    </syncbar>
  - <syncbar id="1522" name="SyncBarH1">
      <description />
      <predecessors_id id="10" />
      <successors_id id="1523" />
      <successors_id id="1524" />
    </syncbar>
  - <syncbar id="1525" name="SyncBarH2">
      <description />
      <predecessors_id id="1523" />
      <predecessors_id id="1524" />
      <successors_id id="1526" />
    </syncbar>
</process>
```

4702 4704 4706 4710 4708 4712 4714 4716

FIG. 48

4800

```
<?xml version="1.0" encoding="UTF-8" ?>
- <A:plan name="Serial_And_Parallel" userid="JK" xmlns:A="workflow">
  - <A:description>
    - <![CDATA[
    No Description
    ]]>
  </A:description>
  - <A:task activityID="10" caption="Serial 1"
      link="Sample_Project_Plans/Serial_And_Parallel/Task_2.xml" name="Task_2"
      owner="Worker"
      processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
      type="general" userid="JK">
    <A:start>2001 8 1 9</A:start>                    4804
    <A:finish>2001 8 1 18</A:finish>                 4806
    <A:supertask name="Task_1" />
    <A:user>JK</A:user>
    <A:successor name="Task_3" />
    <A:successor name="Task_4" />
  </A:task>                                          4802
  - <A:task activityID="1523" caption="Parallel 1"
      link="Sample_Project_Plans/Serial_And_Parallel/Task_3.xml" name="Task_3"
      owner="Worker"
      processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
      type="general" userid="JK">
    <A:start>2001 8 1 18</A:start>                   4812
    <A:finish>2001 8 2 18</A:finish>                 4816
    <A:supertask name="Task_1" />
    <A:user>JK</A:user>
    <A:predecessor name="Task_2" />
    <A:successor name="Task_5" />
  </A:task>                                          4808
  - <A:task activityID="1524" caption="Parallel 2"
      link="Sample_Project_Plans/Serial_And_Parallel/Task_4.xml" name="Task_4"
      owner="Worker"
      processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
      type="general" userid="JK">
    <A:start>2001 8 1 18</A:start>                   4814
    <A:finish>2001 8 2 18</A:finish>                 4818
    <A:supertask name="Task_1" />
    <A:user>JK</A:user>
    <A:predecessor name="Task_2" />
    <A:successor name="Task_5" />
  </A:task>                                          4810
  - <A:task activityID="1526" caption="Serial 2"
      link="Sample_Project_Plans/Serial_And_Parallel/Task_5.xml" name="Task_5"
      owner="Worker"
      processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
      type="general" userid="JK">
    <A:start>2001 8 2 18</A:start>                   4822
    <A:finish>2001 8 3 18</A:finish>                 4824
    <A:supertask name="Task_1" />
    <A:user>JK</A:user>
    <A:predecessor name="Task_3" />
    <A:predecessor name="Task_4" />
  </A:task>                                          4820
  - <A:task activityID="NONE" caption="Serial And Parallel"
      link="Sample_Project_Plans/Serial_And_Parallel/Task_1.xml" name="Task_1"
      processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
      type="general" userid="JK">
    <A:start>2001 8 1 8</A:start>
    <A:finish>2001 8 3 18</A:finish>
    <A:user>JK</A:user>
    <A:subtask name="Task_2" />
```

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FIG. 49

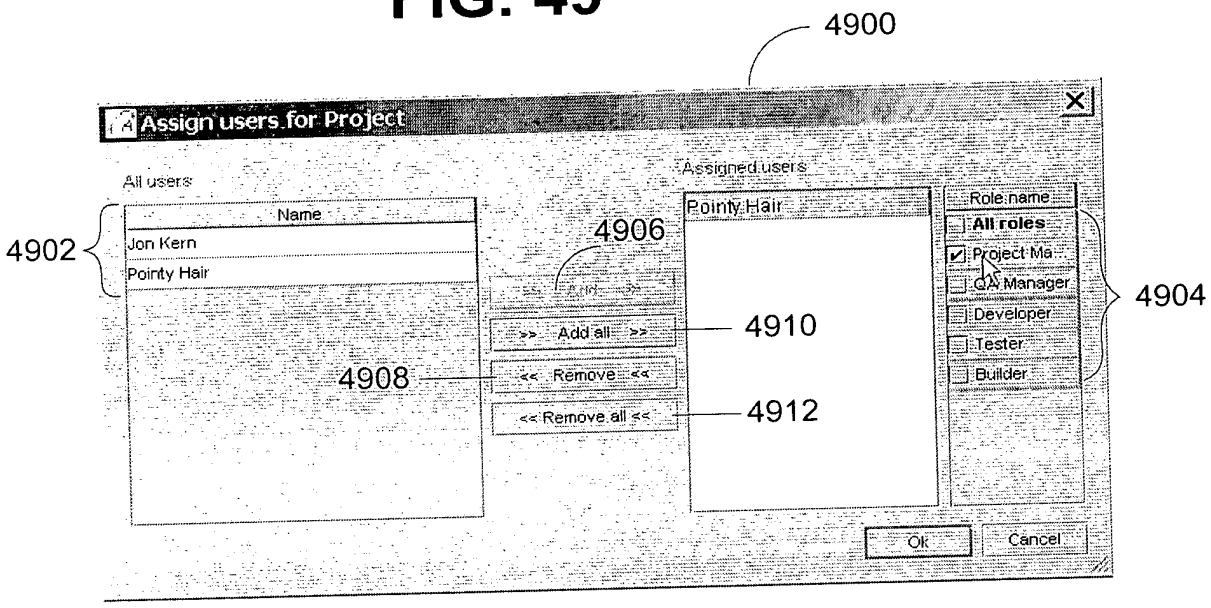
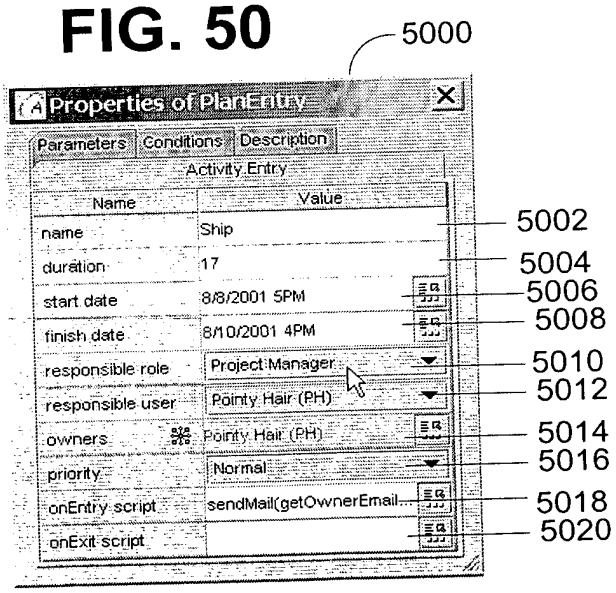


FIG. 50



IDF2900: 26945960

FIG. 51

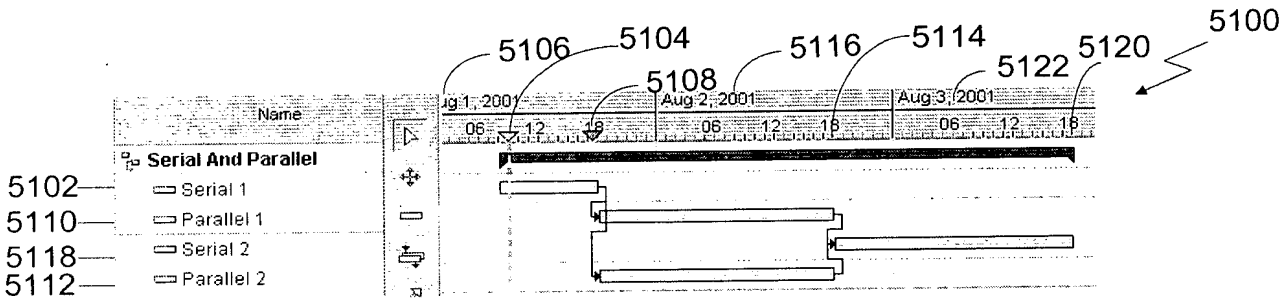


FIG. 52

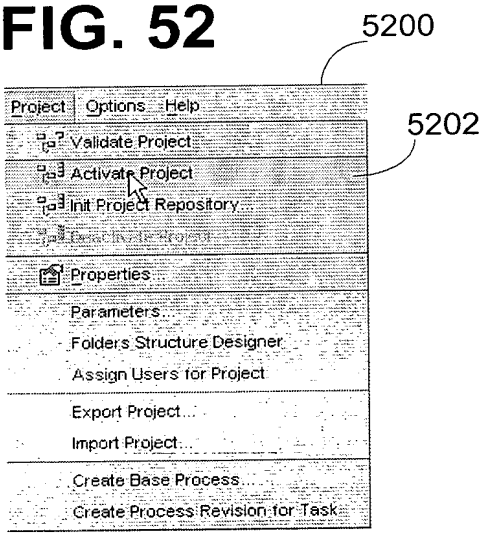


FIG. 53

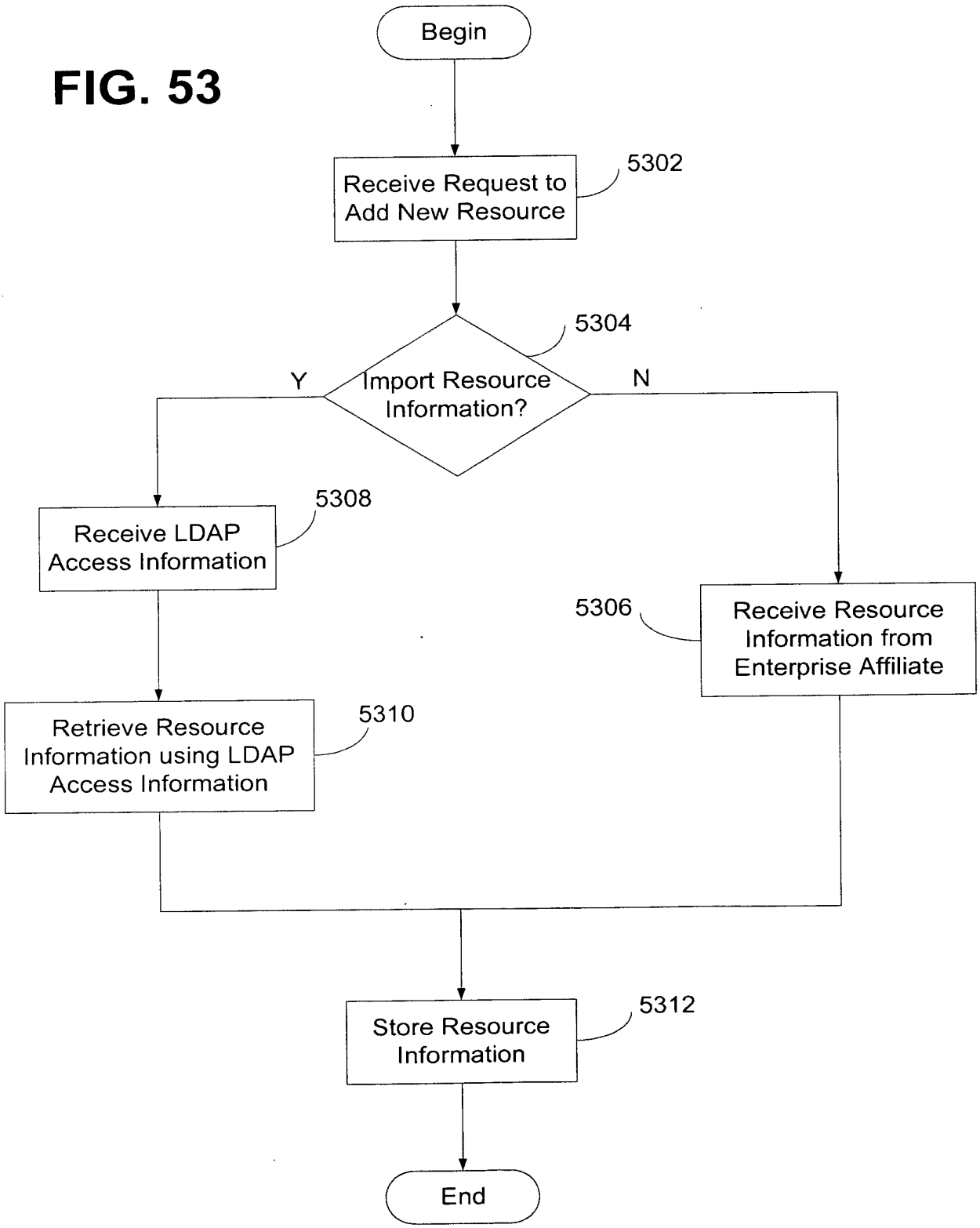

Begin
Receive Request to Add New Resource
5302
Import Resource Information?
5304
Y
N
Receive LDAP Access Information
5308
Receive Resource Information from Enterprise Affiliate
5306
Retrieve Resource Information using LDAP Access Information
5310
Store Resource Information
5312
End

FIG. 54

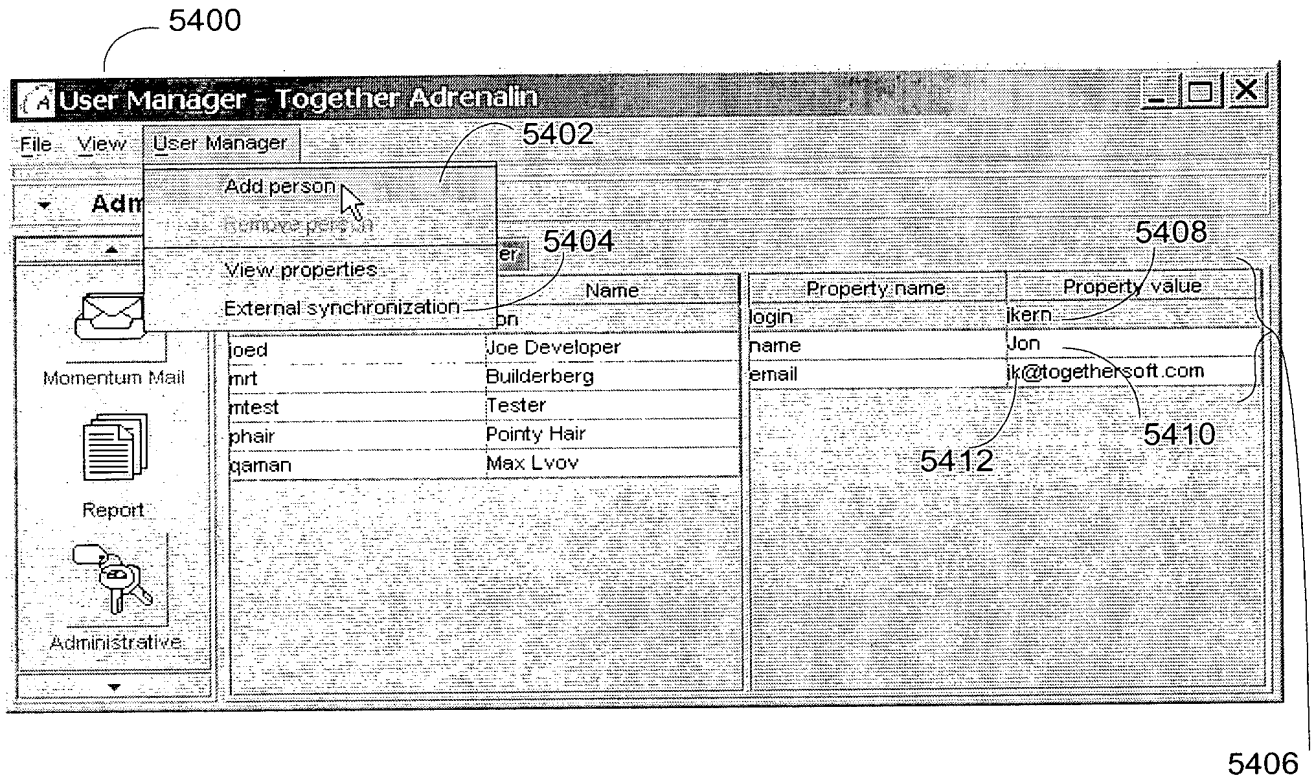

5400
User Manager - Together Adrenalin
File View User Manager
Add person
Remove person
View properties
External synchronization
5402
5404
5408
Momentum Mail
Report
Administrative
Name
joed
Joe Developer
mrt
Builderberg
mtest
Tester
phair
Pointy Hair
qaman
Max Lvov
Property name
Property value
login
ikern
name
Jon
email
ik@togethersoft.com
5410
5412
5406

FIG. 55

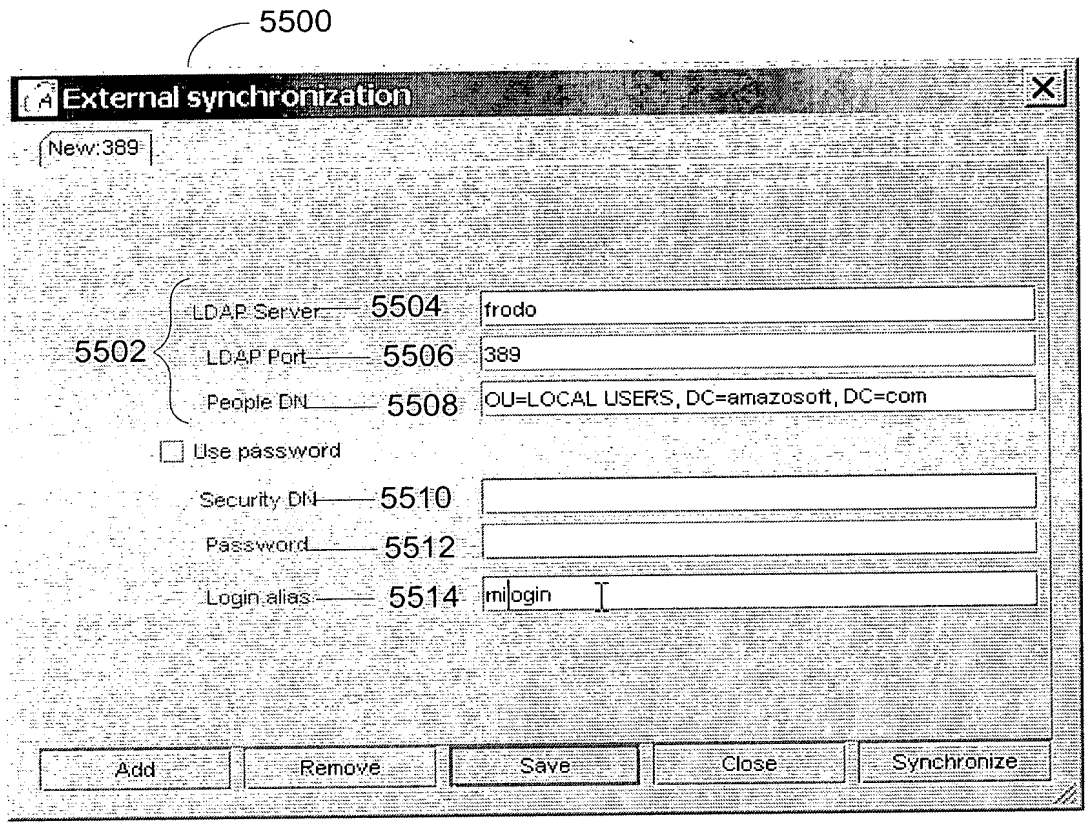

5500
External synchronization
New:389
5502
LDAP Server
5504
frodo
LDAP Port
5506
389
People DN
5508
OU=LOCAL USERS, DC=amazosoft, DC=com
Use password
Security DN
5510
Password
5512
Login alias
5514
mi login
Add
Remove
Save
Close
Synchronize

FIG. 56

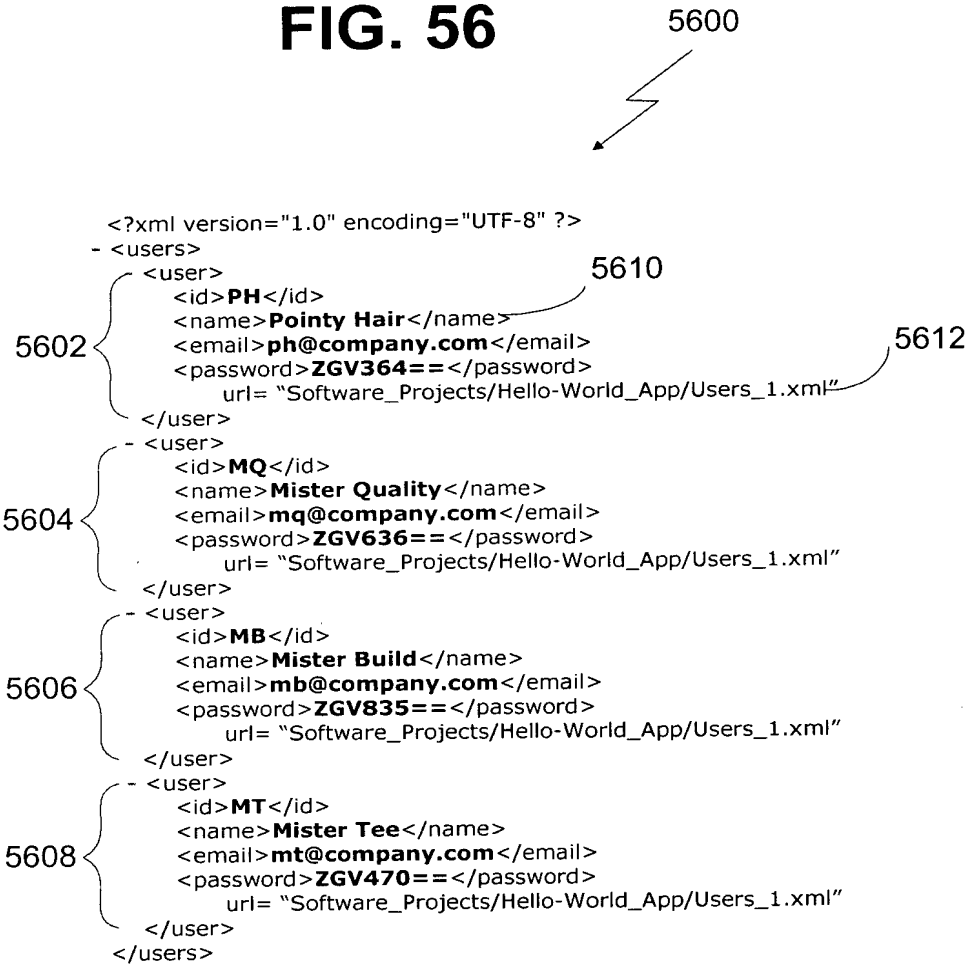

5600
<?xml version="1.0" encoding="UTF-8" ?>
- <users>
5602
<user>
<id>PH</id>
<name>Pointy Hair</name>
<email>ph@company.com</email>
<password>ZGV364==</password>
url= "Software_Projects/Hello-World_App/Users_1.xml"
</user>
5610
5612
5604
- <user>
<id>MQ</id>
<name>Mister Quality</name>
<email>mq@company.com</email>
<password>ZGV636==</password>
url= "Software_Projects/Hello-World_App/Users_1.xml"
</user>
5606
- <user>
<id>MB</id>
<name>Mister Build</name>
<email>mb@company.com</email>
<password>ZGV835==</password>
url= "Software_Projects/Hello-World_App/Users_1.xml"
</user>
5608
- <user>
<id>MT</id>
<name>Mister Tee</name>
<email>mt@company.com</email>
<password>ZGV470==</password>
url= "Software_Projects/Hello-World_App/Users_1.xml"
</user>
</users>

FIG. 57A

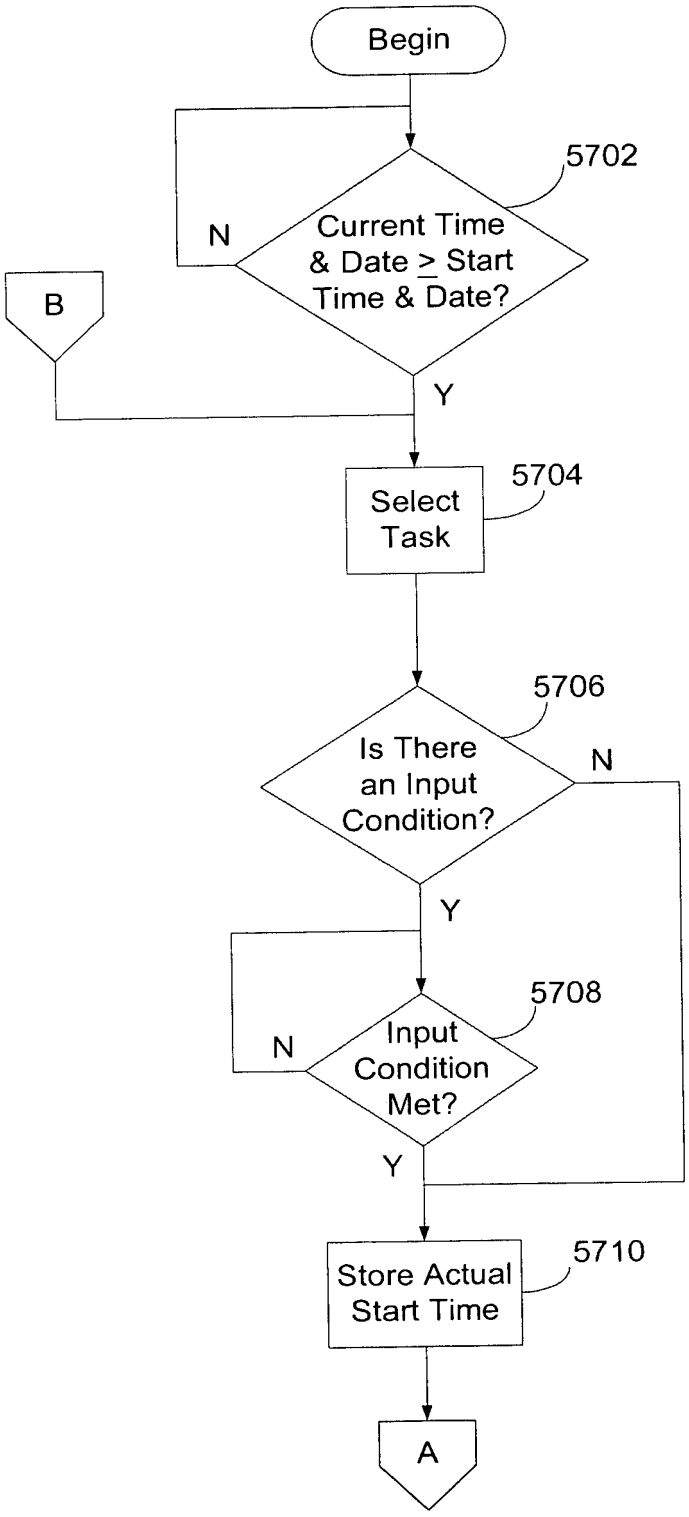

Begin
5702
Current Time & Date ≥ Start Time & Date?
N
Y
B
5704
Select Task
5706
Is There an Input Condition?
N
Y
5708
Input Condition Met?
N
Y
5710
Store Actual Start Time
A

FIG. 57B

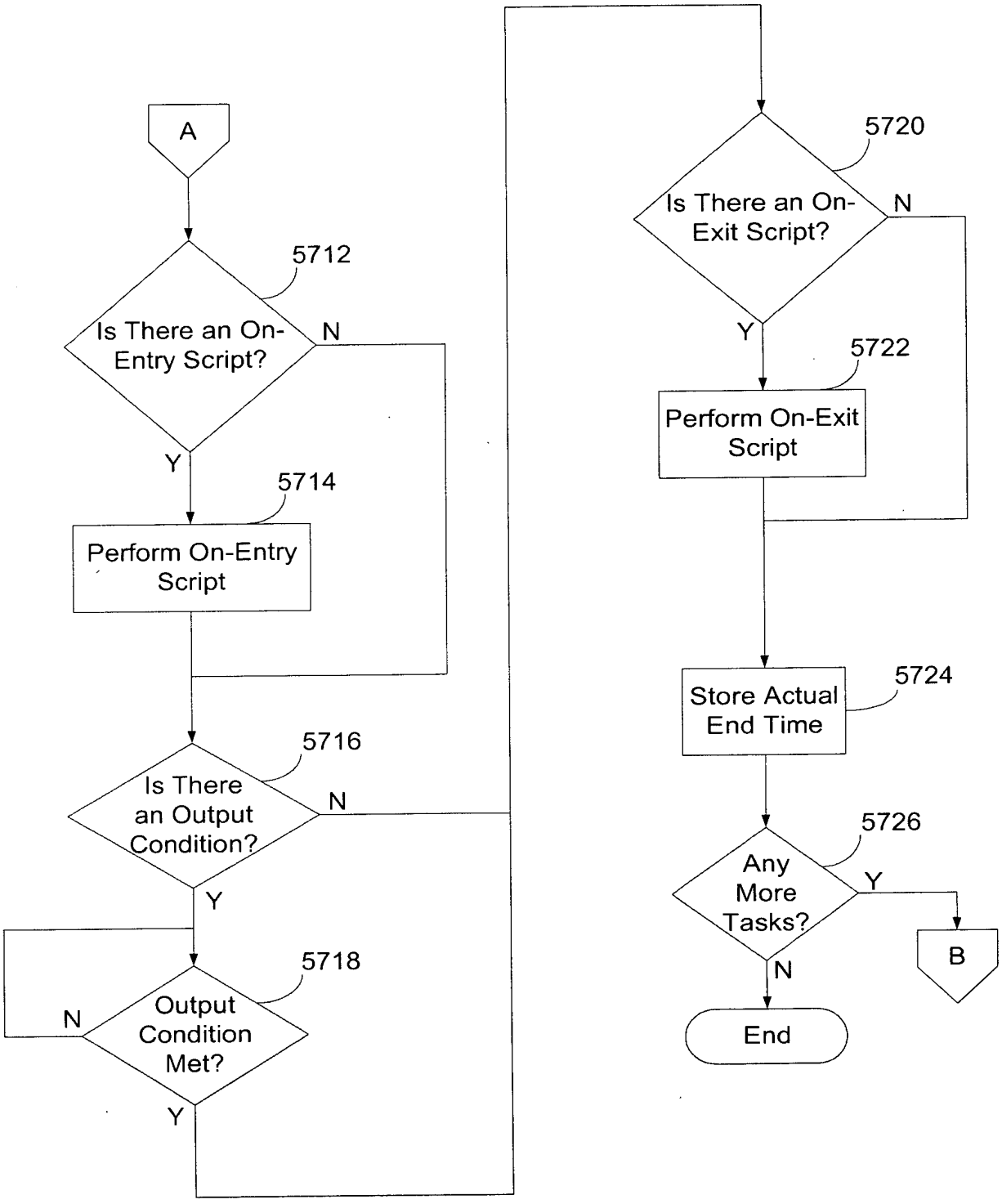

A
5712
Is There an On-Entry Script?
N
Y
5714
Perform On-Entry Script
5716
Is There an Output Condition?
N
Y
5718
Output Condition Met?
N
Y
5720
Is There an On-Exit Script?
N
Y
5722
Perform On-Exit Script
5724
Store Actual End Time
5726
Any More Tasks?
Y
N
B
End

FIG. 58

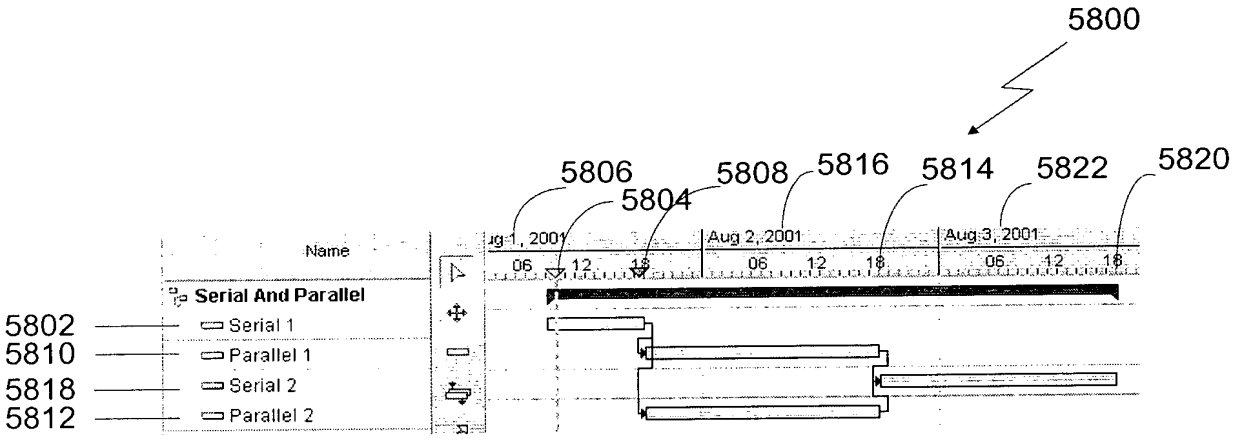

5800
5806
5804
5808
5816
5814
5822
5820
Name
Serial And Parallel
Serial 1
Parallel 1
Serial 2
Parallel 2
5802
5810
5818
5812
Aug 1, 2001
Aug 2, 2001
Aug 3, 2001
06
12
18
06
12
18
06
12
18

FIG. 59

5900

```
<?xml version="1.0" encoding="UTF-8" ?>
- <A:plan name="Serial_And_Parallel" userid="JK" xmlns:A="workflow">
  - <A:description>
    - <![CDATA[
    No Description
      ]]>
    </A:description>
  - <A:task activityID="10" caption="Serial 1"
        link="Sample_Project_Plans/Serial_And_Parallel/Task_2.xml" name="Task_2"
        owner="Worker"
        processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
        type="general" userid="JK">
      <A:start>2001 8 1 8</A:start>
      <A:finish>2001 8 1 18</A:finish>
      <A:supertask name="Task_1" />
      <A:user>JK</A:user>
      <A:successor name="Task_3" />
      <A:successor name="Task_4" />
    </A:task>
  - <A:task activityID="1523" caption="Parallel 1"
        link="Sample_Project_Plans/Serial_And_Parallel/Task_3.xml" name="Task_3"
        owner="Worker"
        processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
        type="general" userid="JK">
      <A:start>2001 8 1 18</A:start>
      <A:finish>2001 8 2 18</A:finish>
      <A:supertask name="Task_1" />
      <A:user>JK</A:user>
      <A:predecessor name="Task_2" />
      <A:successor name="Task_5" />
    </A:task>
  - <A:task activityID="1524" caption="Parallel 2"
        link="Sample_Project_Plans/Serial_And_Parallel/Task_4.xml" name="Task_4"
        owner="Worker"
        processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
        type="general" userid="JK">
      <A:start>2001 8 1 18</A:start>
      <A:finish>2001 8 2 18</A:finish>
      <A:supertask name="Task_1" />
      <A:user>JK</A:user>
      <A:predecessor name="Task_2" />
      <A:successor name="Task_5" />
    </A:task>
  - <A:task activityID="1526" caption="Serial 2"
        link="Sample_Project_Plans/Serial_And_Parallel/Task_5.xml" name="Task_5"
        owner="Worker"
        processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
        type="general" userid="JK">
      <A:start>2001 8 2 18</A:start>
      <A:finish>2001 8 3 18</A:finish>
      <A:supertask name="Task_1" />
      <A:user>JK</A:user>
      <A:predecessor name="Task_3" />
      <A:predecessor name="Task_4" />
    </A:task>
  - <A:task activityID="NONE" caption="Serial And Parallel"
        link="Sample_Project_Plans/Serial_And_Parallel/Task_1.xml" name="Task_1"
        processURL="http://localhost:8080/webdav/ProcessGroup2/Process1.xml"
        type="general" userid="JK">
      <A:start>2001 8 1 8</A:start>
      <A:finish>2001 8 3 18</A:finish>
      <A:user>JK</A:user>
      <A:subtask name="Task_2" />
```

Process Software

FIG. 60

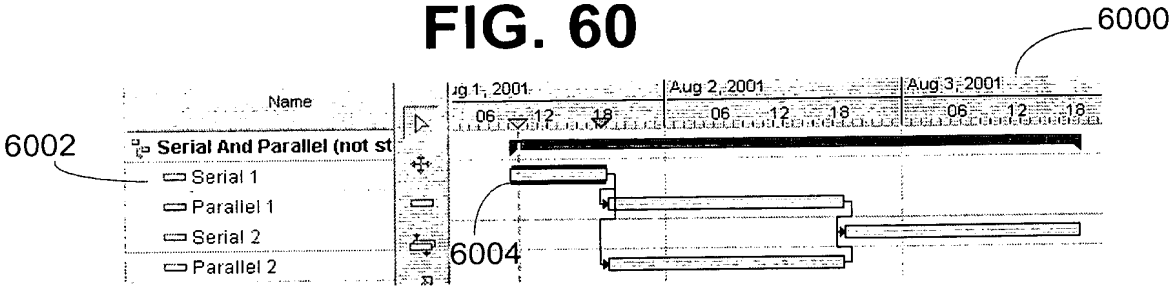


FIG. 61

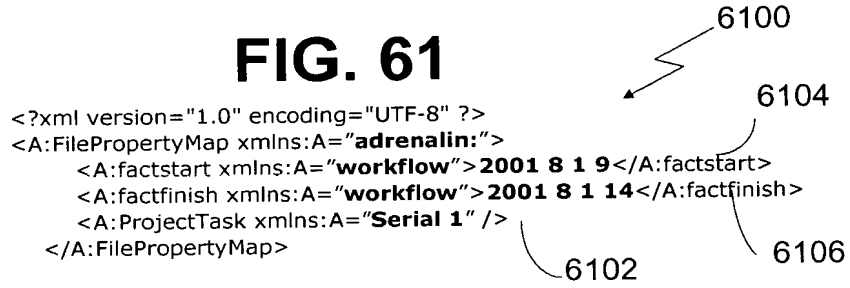


FIG. 62

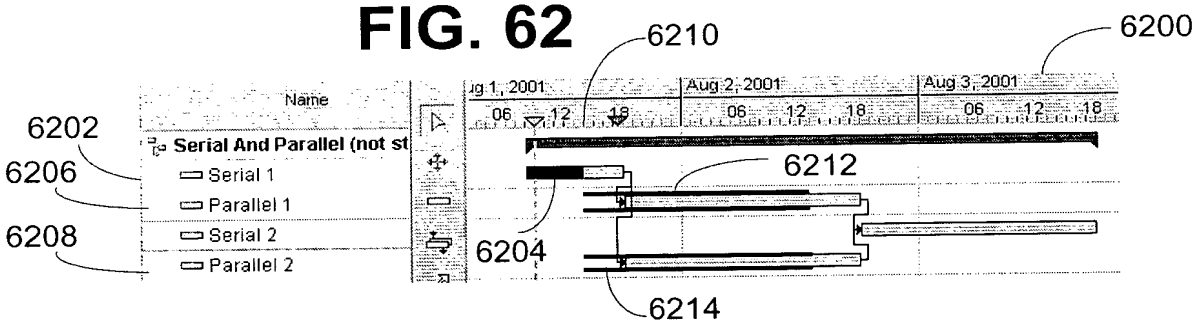


FIG. 63

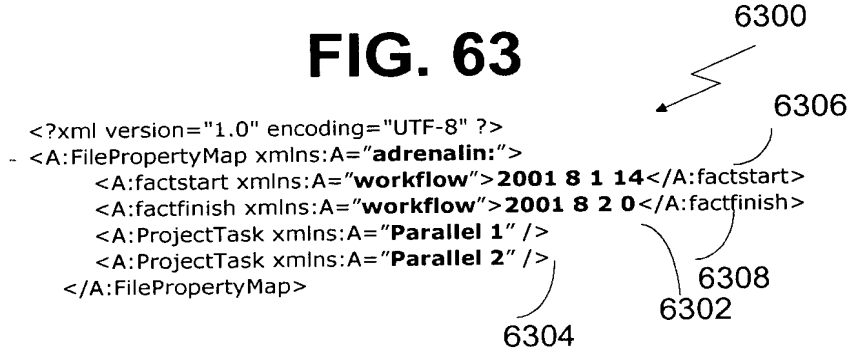


FIG. 64

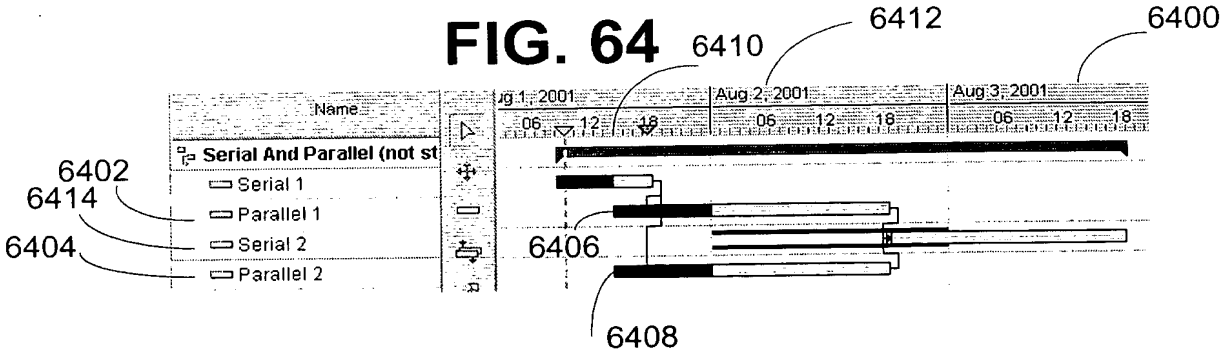


FIG. 65

6500

```
<?xml version="1.0" encoding="UTF-8" ?>
- <A:FilePropertyMap xmlns:A="adrenalin:">
      <A:factstart xmlns:A="workflow">2001 8 2 0</A:factstart>
      <A:factfinish xmlns:A="workflow">2001 8 2 12</A:factfinish>
      <A:ProjectTask xmlns:A="Serial 2" />
  </A:FilePropertyMap>
```

6504

6506

6502

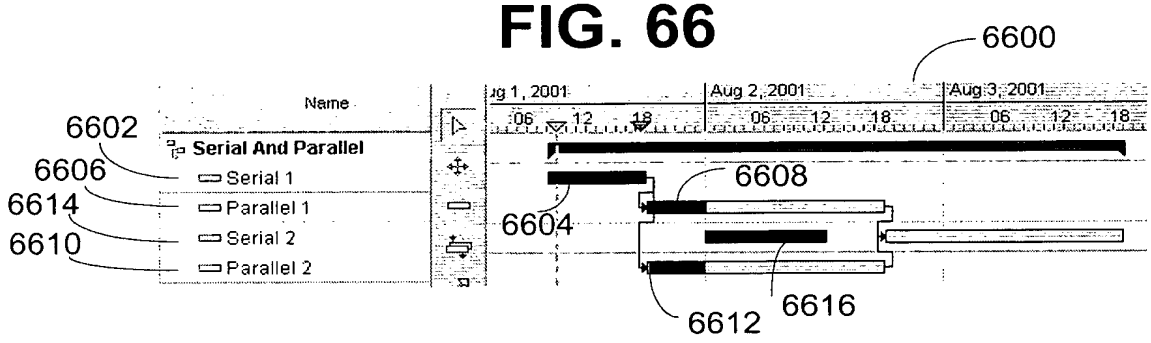



FIG. 66